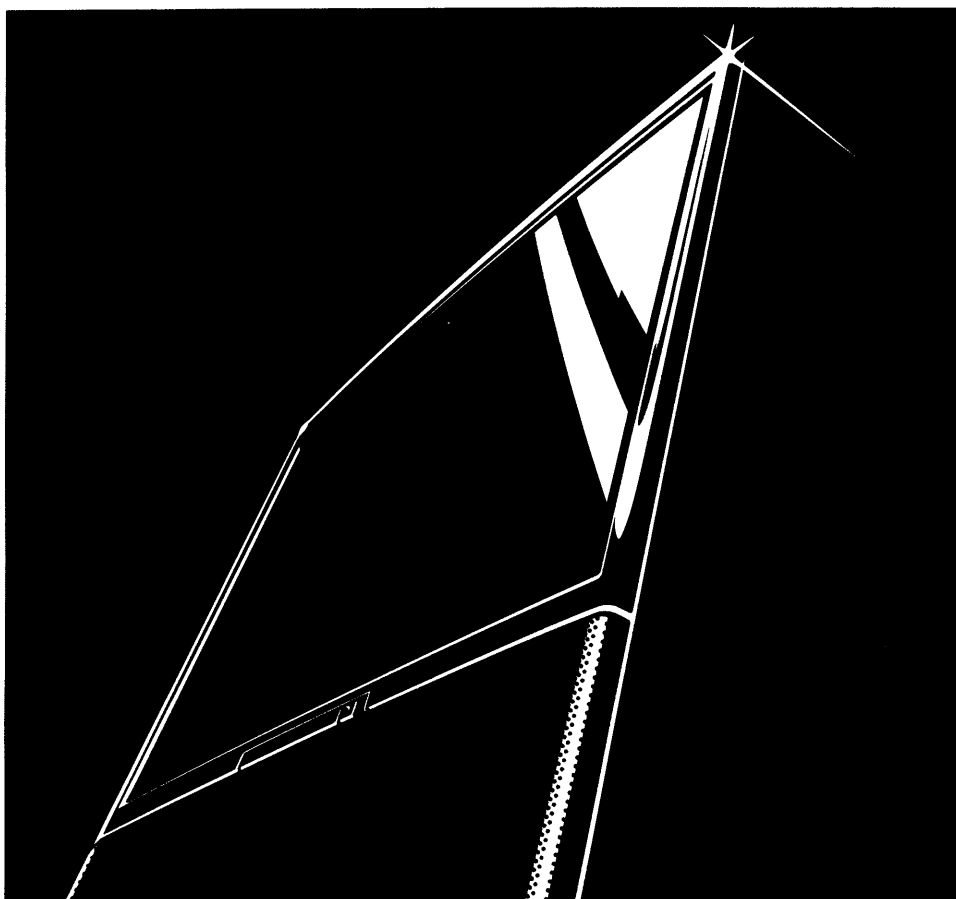


TOSHIBA

Projection Television OWNER'S MANUAL

TW40H80

16:9
WIDE



Dear Customer

Welcome to the high quality picture world created by the TOSHIBA Projection Color Television.

This manual will help you use the TV's many exciting and useful features.

Before operating the TV, please read all the safety and operating instructions in this manual thoroughly, and keep the manual for future reference.

Customer's Record

You will find the model number and serial number on the back of the TV.

Record these numbers in the spaces provided below.

Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

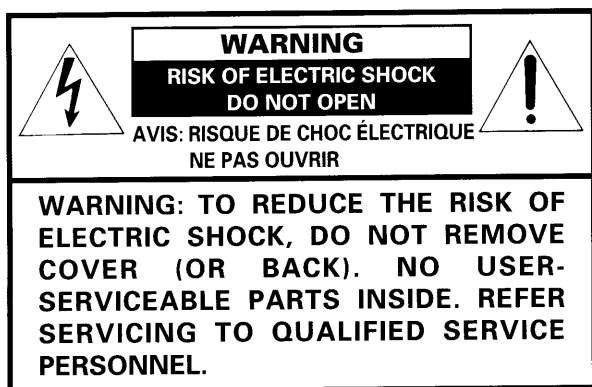
Model Number _____

Serial Number _____

Safety Precautions

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



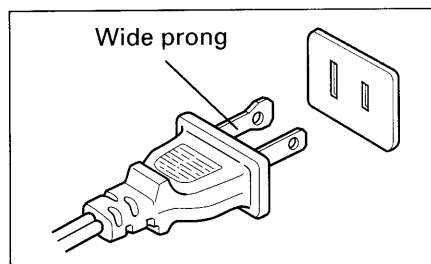
The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.



The exclamation point in the triangle tells you that important operating and maintenance instructions follow this symbol.

CAUTION:

As a safety feature, the AC plug has one prong wider than the other. It will fit only one way into a standard electrical outlet. If the plug will not fit into the outlet, try turning it around. If the plug will not fit either way, the outlet is probably old and non-standard. You will need to have a new outlet installed by an electrician. DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.



CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS OF THE POLARIZED PLUG.

NOTE TO CATV SYSTEM INSTALLERS IN THE USA:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Table of Contents

CHAPTER 1 INTRODUCTION

Care and Cleaning	4
Installation	5
To install the TV	5
Antenna/Cable TV Connections	6
To connect a home antenna	7
To connect Cable TV	8
To connect an Antenna/Cable TV and VCR	9
Location of Controls	11
TV front	11
Remote Control	12
Before Using the Remote Control	13
Introduction and battery installation	13
Using the Remote with VCR or	
Cable TV Converter	14
VCR and CABLE function buttons	14
Programming the Remote Control	15
To program the Remote Control	15
Quick Reference Menu Guide	18
Menus and functions	18

CHAPTER 2 GETTING STARTED

Turning the TV On/Off	20
To turn the TV on/off	20
Selecting the Antenna Input	21
To select the antenna input	21
Programming Channel Memory	22
TV/CABLE and CH PROGRAM functions	22
ADD/ERASE function	23
Aligning the colors	24
To align the colors	24

CHAPTER 3 BASIC OPERATION

Watching TV Programs	25
To watch a TV program	25
Convenient Remote Functions	26
To use On-screen displays/Sound muting/ Channel return	26
To display EDS information	27
Enjoying Wide Pictures	28
To select the picture size	28
To adjust the height and the vertical position of the THEATER WIDE mode picture	29
Controlling the Picture	31
To adjust the picture	31
Controlling the Sound	34
To adjust the sound	34
Selecting Stereo and SAP Broadcasts	35
To listen to Stereo/SAP broadcasts	35

CHAPTER 4 ADVANCED OPERATION

Enhancing the Surround Sound Effect	36
To activate the Surround sound function	36
To operate the Sub-Bass System	37
Setting the OFF Timer and the Clock	38
To set the OFF timer (Sleep timer)	38
To set the clock	39
Double-Window Function	40
To display a window picture	40
To use advanced functions	41
Locking Channels	42
To lock out channels	42
Labeling Channels	44
To program channel labels	44
Programming Your Favorite Channels	46
To program your favorite channels	46
To clear the channels you have programmed	47
Operating the Closed Captioning Feature	48
To display Closed Captioning	48
To display text information	49
Flesh Tone/Noise Reduction	50
To activate the Flesh Tone and Noise Reduction functions	50
Changing the On-screen Display Language	51
To select a language for the on-screen displays	51

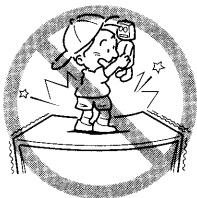
CHAPTER 5 CONNECTING OTHER EQUIPMENT

Connecting External Equipment	52
To connect video/audio equipment	52
Monitor panel	53
To connect a standard VCR	54
To connect a VCR with an S-video jack	55
To connect a DVD video player	56
To connect a video camera	57
To dub/edit video tapes using two VCRs	58
To connect an audio amplifier	59
To connect external speakers	60

CHAPTER 6 ADDITIONAL REFERENCE

Specifications	61
Before Calling Service Personnel	62
Limited United States Warranty	63

Care and Cleaning



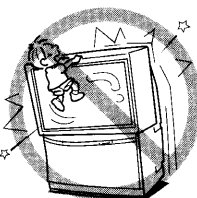
Care

Do not stand or climb on the TV.

- The TV is dangerous if broken or if it has fallen over.
- Be careful when children are present.

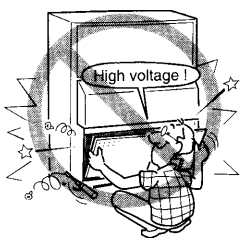
Do not remove the back cover and never remodel the cabinet or components.

- Let only qualified technicians check and adjust your TV.

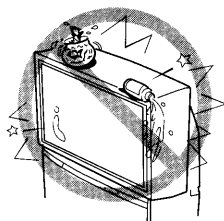


Do not place containers with liquids such as drinks or cosmetics on the TV.

If any foreign material or water leaks into the TV, unplug the AC cord and contact your dealer.



Keep magnets, toys with magnets, electric clocks, speakers, etc. away from the TV.



Cleaning

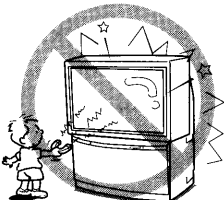
Do not use solvents such as benzine or thinner to clean the TV.

- These solvents may distort the cabinet or damage its finish.
- If rubber or vinyl products remain in contact with the TV for a long time, a stain may result.

When the cabinet becomes dirty, clean it with a soft, dry cloth.

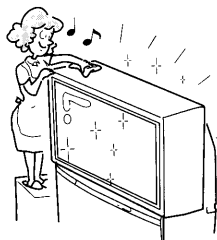
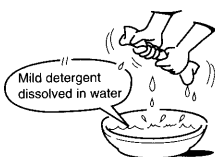
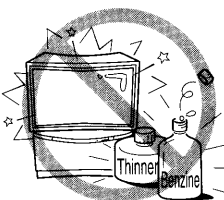
When the cabinet is very dirty,

- ① Use a damp cloth to wipe the cabinet clean.
- ② Finish with a dry cloth.



When cleaning the screen:

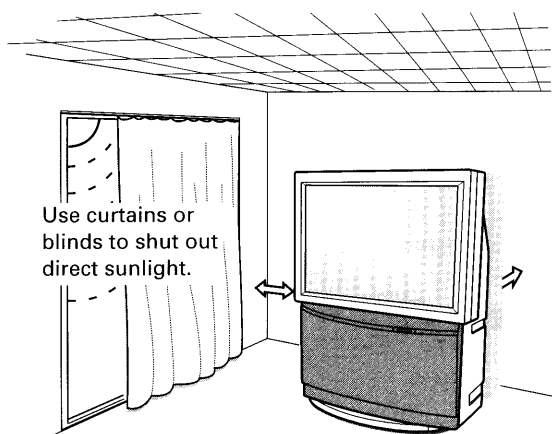
- ① Turn off the TV.
- ② Clean the screen with a soft, dry cloth.



Installation

To install the TV

Downward spot lights or fluorescent lights in an overhead "Honeycomb" prevent direct illumination of the screen.



Cover shiny surfaces (floor and walls) with non-reflective materials (carpet, rugs, wallpaper, etc.).

Where to install

Place the TV on the floor or on a sturdy platform. The mounting surface should be flat and steady. If you install the TV on a soft floor, make sure that the floor is not damaged by the weight of the TV.

Air Circulation

Place the TV far enough away from the walls to allow proper ventilation. This will prevent the TV from overheating and avoid possible damage to the TV. Avoid dusty places too.

Heat Damage

Damage may occur if you leave the TV in direct sunlight or near a heater. Avoid places subject to extremely high temperatures or humidity, and temperatures of 41°F (5°C) or lower.

Power Supply

Plug the TV into an electrical outlet with standard household power (120 volt AC, 60 Hz). Do not change the plug's safety prong.

See page 2.

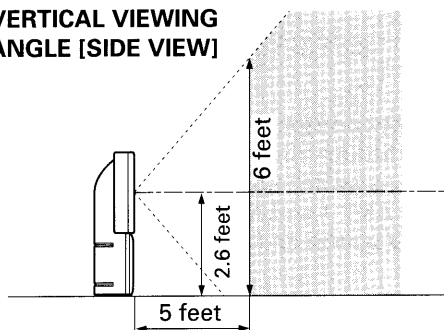
Moisture Condensation

If the room temperature suddenly rises (or if the TV is moved from a cool place to a hot place), condensation may occur on the lenses resulting in picture distortion or color fading. In such a case, simply wait a while (with the power on) and the condensation will evaporate.

Best Viewing

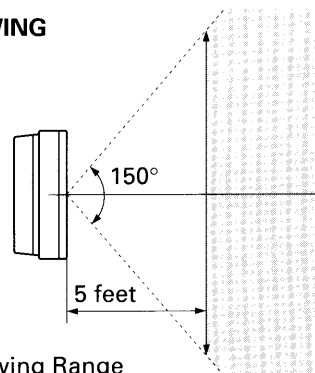
Sit approximately 5 – 25 feet away from the TV. Sitting too far to the left or right of the screen will cause the picture to appear dull as will direct sunlight and room lights. Turn the TV off to check for reflections on the screen. Then remove the source of any reflections while viewing.

VERTICAL VIEWING ANGLE [SIDE VIEW]



Viewing Range

HORIZONTAL VIEWING ANGLE [TOP VIEW]



Viewing Range

Antenna/Cable TV Connections

- You can use either an indoor or outdoor antenna to receive VHF and UHF channels.
- Channels 2-13 are VHF channels, and channels 14-69 are UHF channels.
- We recommend using an outdoor antenna for better picture quality.
- You can receive Cable TV by connecting the cable supplied by your local cable company.

Types of antenna cables

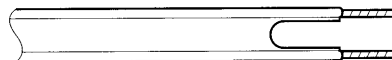
Shown below are two basic types of antenna cables. Signals from a home antenna may be conveyed by either type. Cable TV signals are conveyed by a 75 ohm coaxial cable.

- ① A 75 ohm coaxial cable is generally a round cable with F-type connectors that can easily be attached to a terminal without tools.

F-type connector (Not supplied)

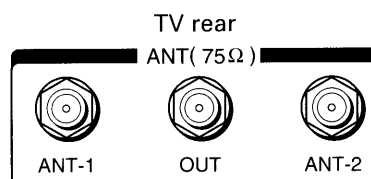


- ② A 300 ohm cable is a flat "twin-lead" cable that can be attached to a terminal using an antenna adapter (Not supplied).



Antenna connection panel

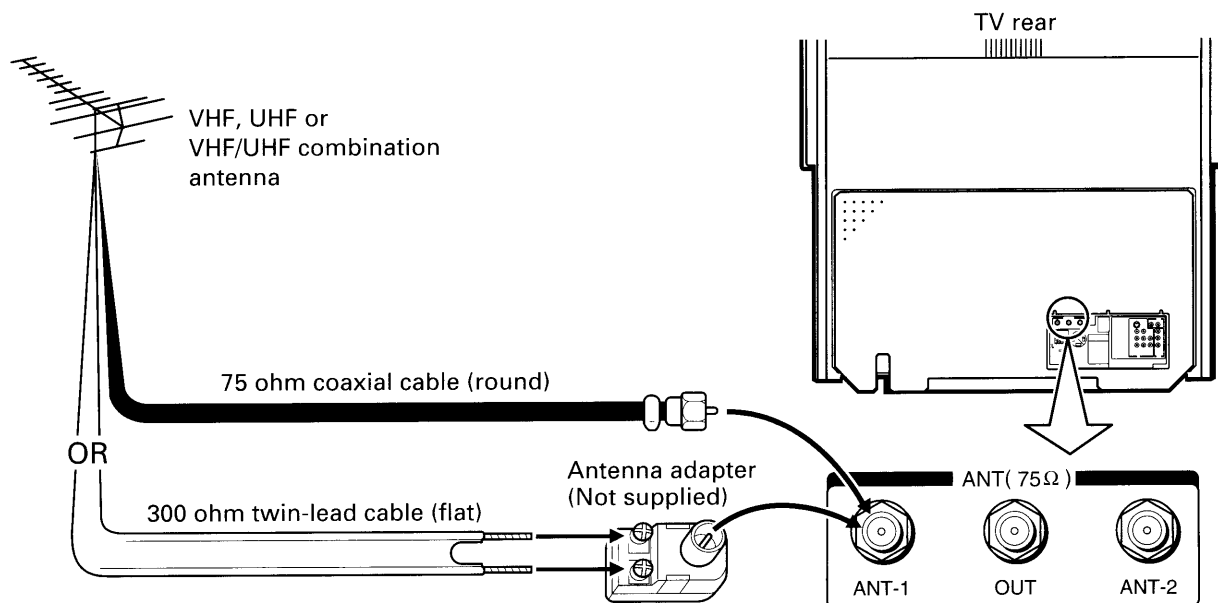
There are two separate 75 ohm F-type connector input terminals and a converter output terminal as shown below.



The ANT-1 and ANT-2 terminals are for connecting a VHF/UHF antenna or cable TV system. The signal input through ANT-1 is also output from the OUT terminal whenever the antenna switch on the TV is in the ANT-2 position. You can switch between the ANT-1 and ANT-2 inputs in the ANT 1/2 menu or with the **ANT/VIDEO** button on the TV. See page 21.

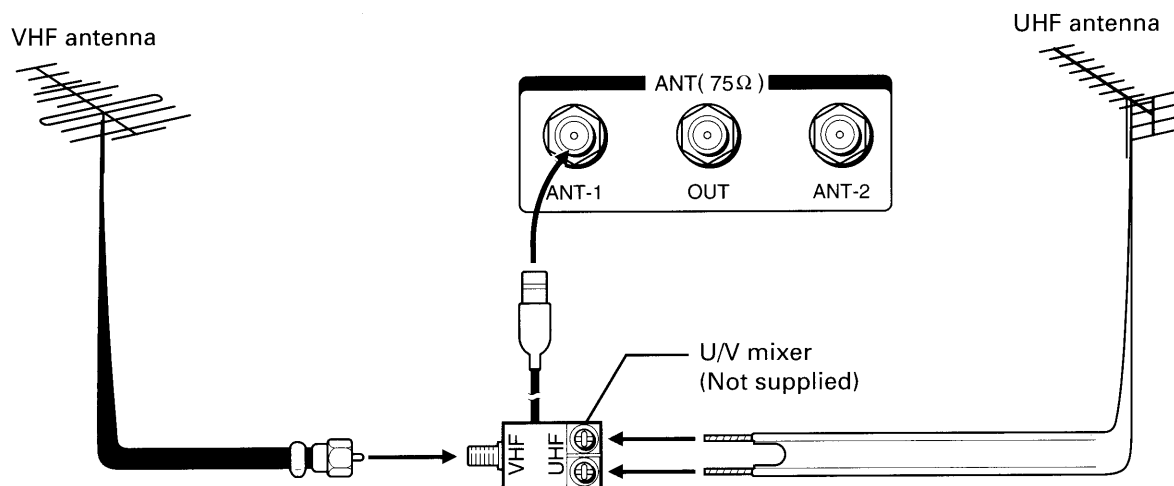
To connect a home antenna

Single antenna cable



Note: You can connect another signal source such as a cable TV system or video game to the ANT-2 terminal.

Separate VHF and UHF antenna cables



Note: You can connect another signal source such as a cable TV system or video game to the ANT-2 terminal.

Antenna/Cable TV Connections (continued)

To connect Cable TV

Generally, the cable TV system cable can be connected directly to the TV's antenna terminal just like a home antenna. **(A-1)**

Some cable companies, however, offer premium pay channels. Since premium pay channel signals are scrambled, a cable TV converter/decoder is generally provided to subscribers by the cable TV company. This decoder box is necessary for normal viewing of the scrambled channels. We recommend that you consult your cable TV company for more specific instructions on installing cable TV. **(A-2)**

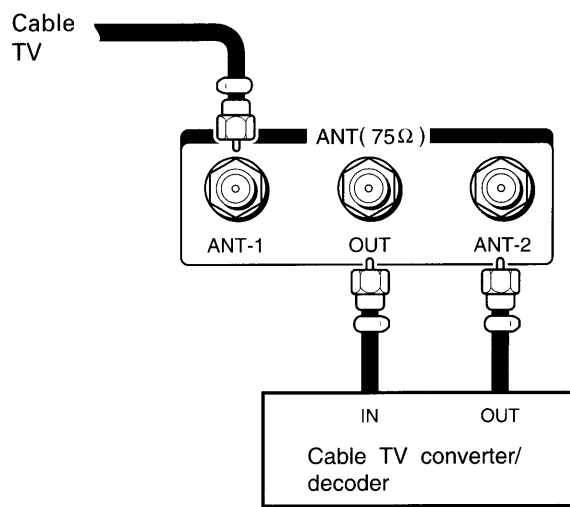
(A-1) Cable without a decoder box (Unscrambled channels)



Note: You can connect another signal source such as a cable TV decoder box or video game to the ANT-2 terminal.

(A-2) Cable with a decoder box (Scrambled and Unscrambled channels)

- The unscrambled channels are input through the ANT-1 terminal whenever the ANT1/2 menu, or the **ANT/VIDEO** button on the TV, is in "ANT 1" mode. See page 21.
- The scrambled channels from the decoding device are input through the ANT-2 terminal whenever the ANT 1/2 menu, or the **ANT/VIDEO** button, is in "ANT 2" mode. Set the TV to channel 3 or 4 to match the output channel of the decoding device.

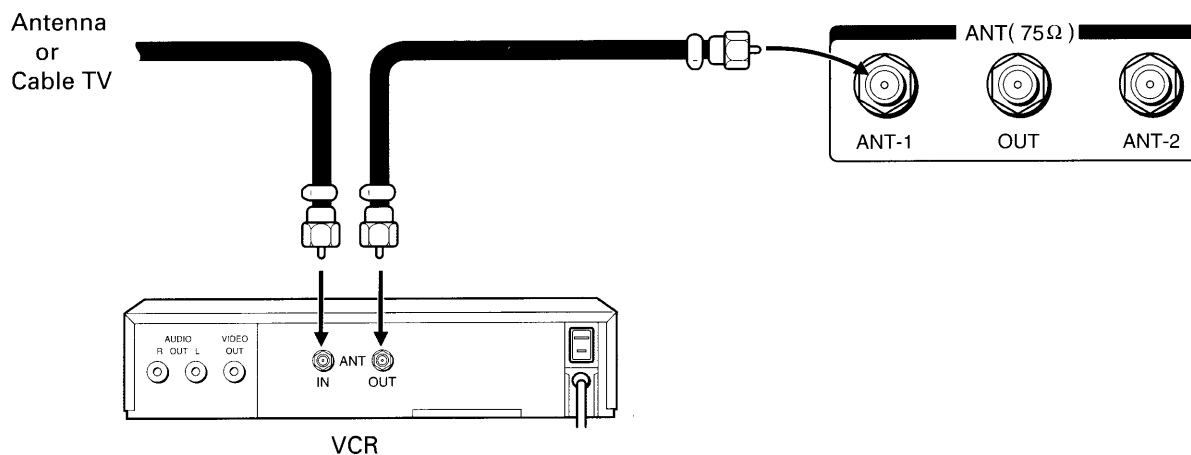


Note: The decoding device may or may not be a part of the cable converter.

- After antenna cable connections are made, you are still required to connect the VCR using AUDIO/VIDEO connecting cables for (stereo tape) playback of good quality from the VCR. See page 54.

To connect an Antenna/Cable TV and VCR

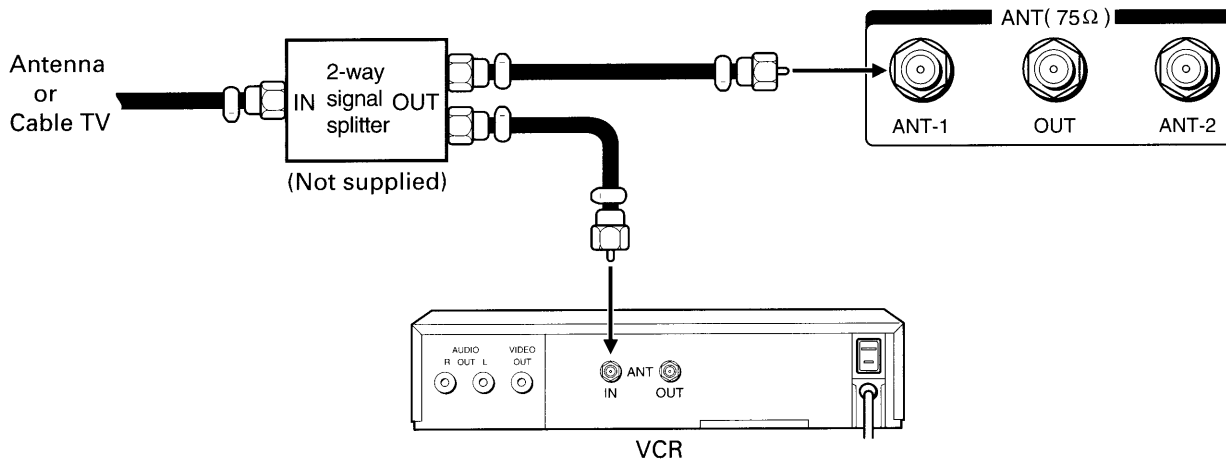
Antenna/Cable TV connection via VCR (Simplified method)



Note: Tape playback may often cause the VCR to interrupt the antenna signal to the TV. If you cannot select a certain channel, try pressing the TV/VCR button on the Remote Control.

Using a 2-way signal splitter

You can view either TV programs or VCR tapes regardless of the position of the VCR's TV/VCR switch.

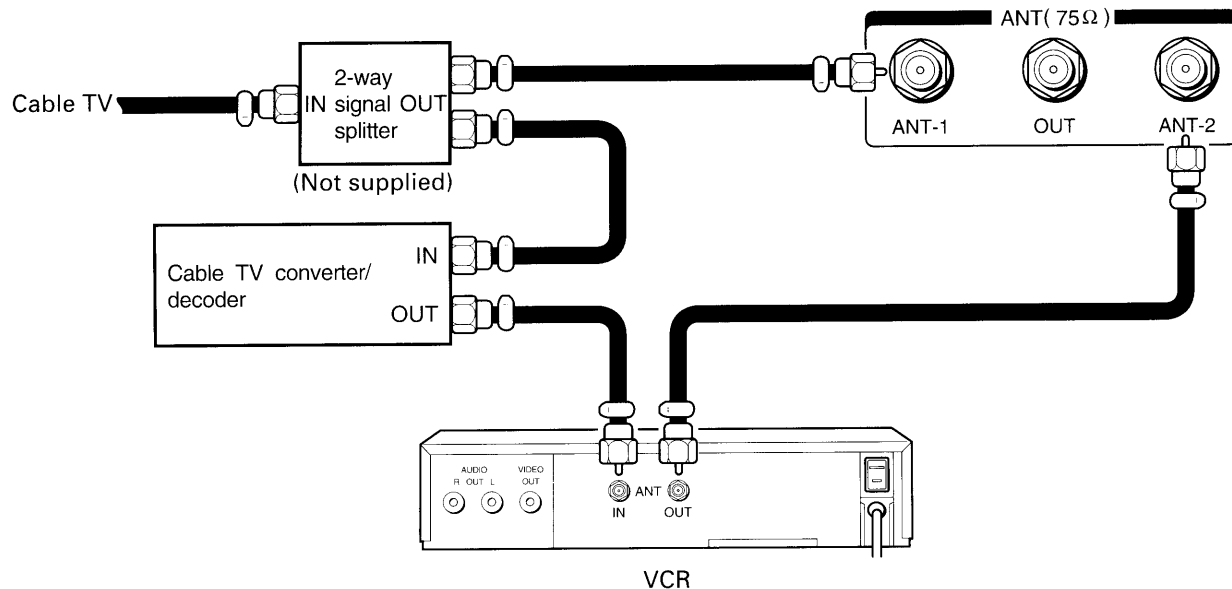


Antenna/Cable TV Connections (continued)

To connect an Antenna/Cable TV and VCR (continued)

Cable with a decoder box

- The unscrambled channels are input through the ANT 1 terminal whenever the ANT1/2 menu (see page 21), or the **ANT/VIDEO** button on the TV, is in the "ANT 1" position.
- The scrambled channels from the decoder box are input through the VCR and the ANT 2 terminal whenever the ANT1/2 menu, or the **ANT/VIDEO** button, is in the "ANT 2" position. Set the TV and the VCR to channel 3 or 4 to match the output channel of the decoding device.

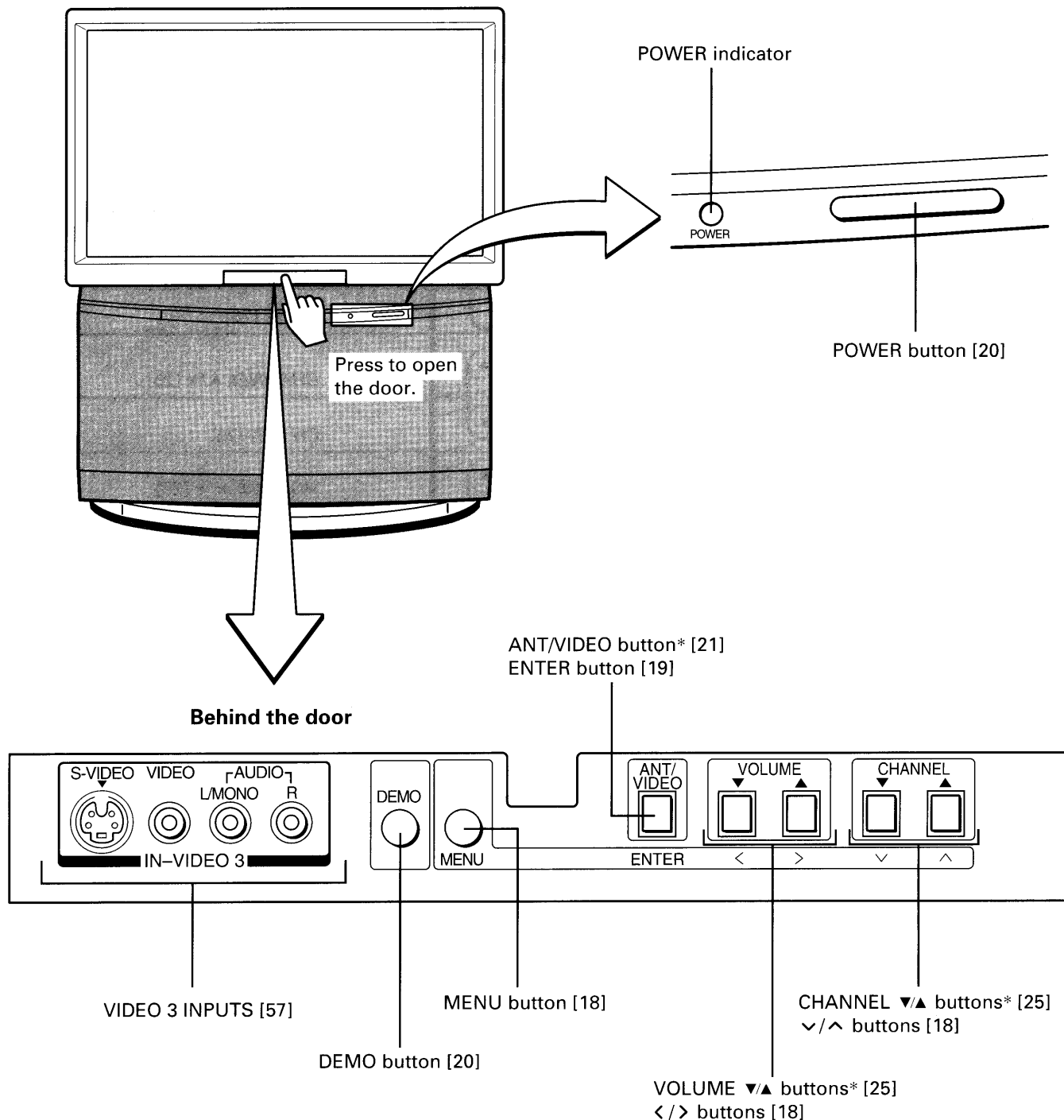


Note: The decoding device may or may not be a part of the cable converter.

Location of Controls

- The following describes the functions of each part of the TV and the Remote Control. For details on the use of each control, refer to the page numbers in brackets.

TV front



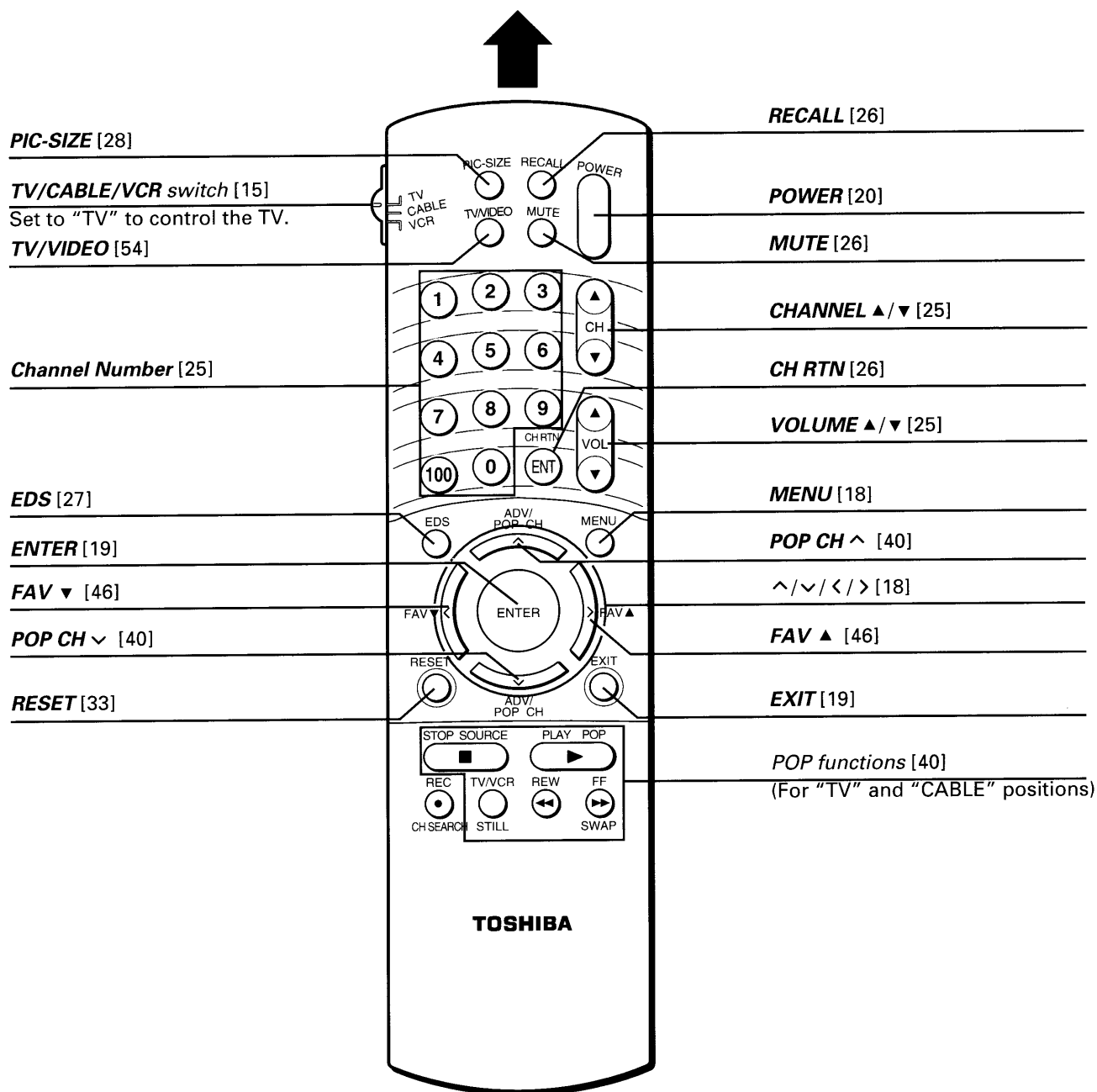
* Dual function buttons

Location of Controls (continued)

Remote Control

Only the buttons used to operate the TV are described here.
For details on the use of each control, refer to the pages in brackets.

Aim at the remote sensor on the TV



Before Using the Remote Control

Introduction and battery installation

With this Remote Control, you can operate your TV and most VCR and cable box models regardless of the manufacturer. However, this Remote Control must first be programmed to control other VCR and cable box brands. See page 15.

If you have a TOSHIBA VCR, your Remote Control has already been programmed for you.

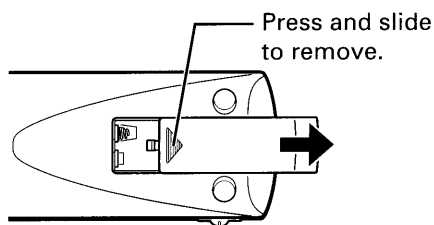
Before attempting to operate your Remote Control, install the batteries according to "To install batteries" below.

Notes:

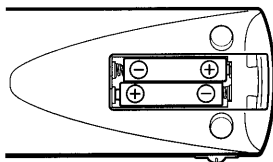
- After installing new batteries, the Remote Control will set itself to the codes for TOSHIBA TVs and VCRs. If you are using the Remote Control to operate other manufacturer's equipment, you will have to reprogram those codes.
- This Remote Control may have functions not available on your VCR and cable box remote controls. These functions may or may not operate your VCR or cable box. Refer to the owner's manuals supplied with the equipment to see which functions are available.
- The remote control supplied with your VCR or cable box may have keys not duplicated on this Remote Control. If you want to use these functions, please use the original remote control.

To install batteries

- 1 Place the Remote Control face down and remove the battery cover.



- 2 Insert two "AAA" size batteries, matching the + and - signs on each battery with the + and - signs in the battery compartment.



- 3 Slide the battery cover shut until the lock clicks.

CAUTIONS:

- Do not throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
- Do not combine used batteries with new ones.
- Do not mix battery types.

Tips for best operation

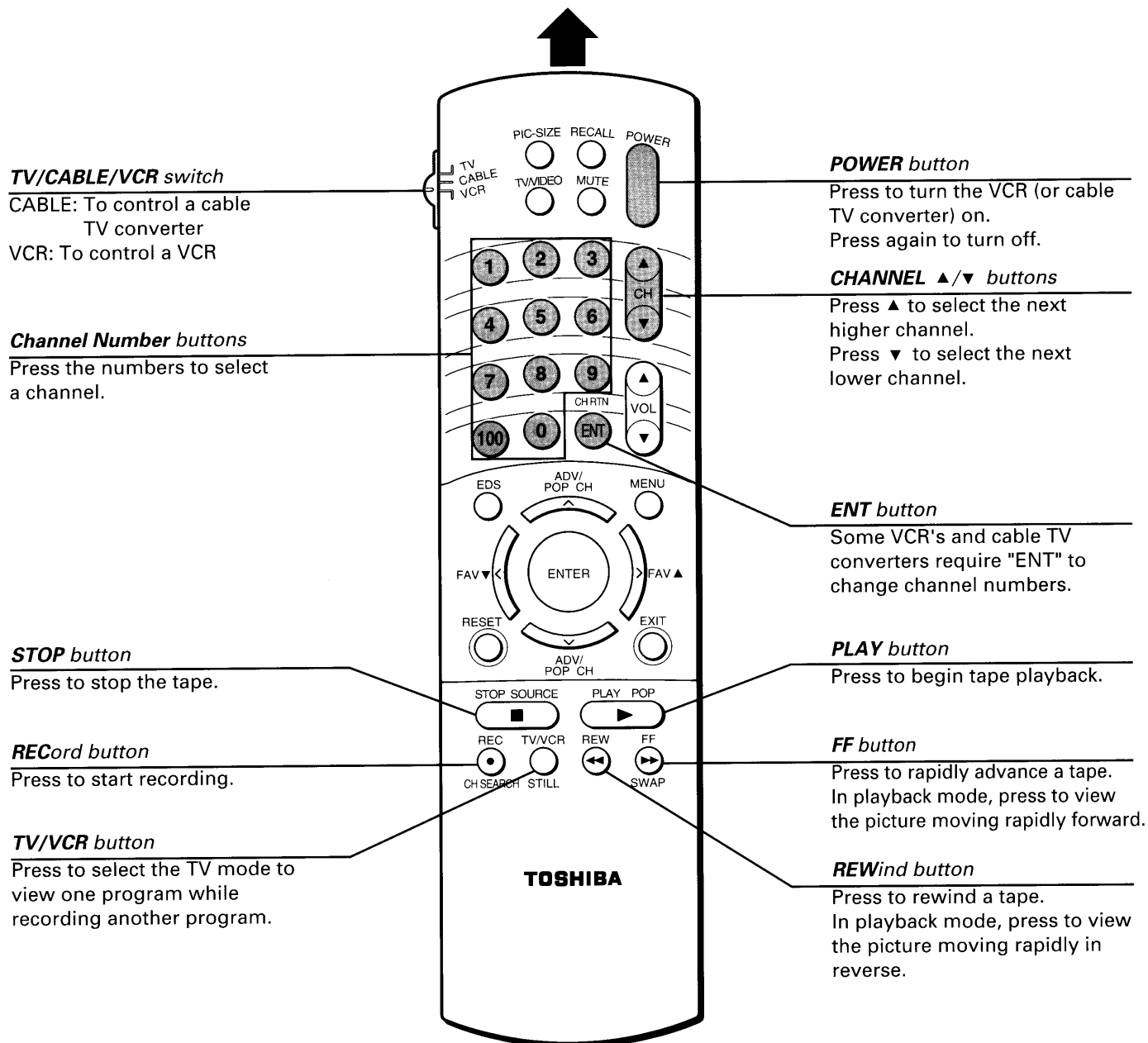
- For optimum performance, aim the Remote Control directly at the TV from a distance within 16 feet (5 m), and be sure there is no obstruction between the Remote Control and the TV.
- If your Remote Control does not always operate the TV as you wish, you probably need to replace the batteries. The life expectancy of the batteries is about 1 year.
- If the Remote Control will not be used for a long period of time or when the batteries are worn out, remove the batteries to prevent leakage.
- Do not drop, dampen or disassemble the Remote Control.

Using the Remote with VCR or Cable TV Converter

VCR and CABLE function buttons

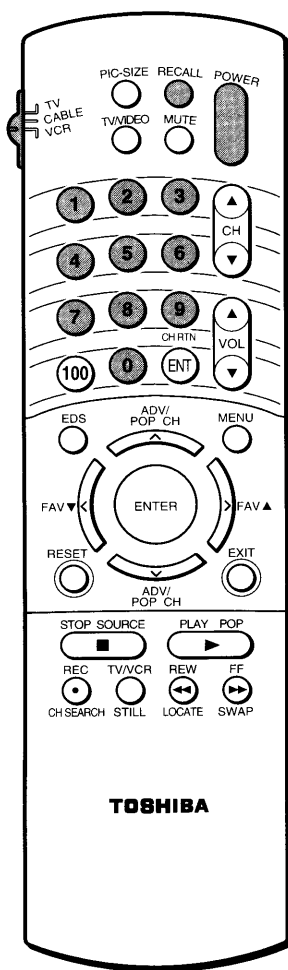
- To control a TOSHIBA VCR, first set the **TV/CABLE/VCR** switch to "**VCR**." The buttons shown below will then control the VCR. The rest of the buttons operate the TV as usual.
If you have another brand of VCR, you can probably program the Remote Control to control it. Details are on page 15.
- To control a cable TV converter, this Remote Control must be programmed to recognize the brand of your converter. See page 15. The shaded buttons can be used to control the cable TV converter.
Set the **TV/CABLE/VCR** switch to "**CABLE**" whenever you want to control the cable TV converter.

Aim at the VCR or cable TV converter



Programming the Remote Control

To program the Remote Control



For future reference, write the code number you set.

VCR CODE: _____

CABLE CODE: _____

- This Remote Control is programmed to operate TOSHIBA VCRs.
- To operate VCRs (or Cable converters) other than TOSHIBA models, perform the following procedures before operating.

1 Refer to the **"VCR code table"** (or **"Cable TV converter code table"**) on pages 16 and 17 to find the code number that corresponds to the brand name of your VCR (or your converter).

If more than one number is listed, try each one separately until you find the one that works.

2 Set the **TV/CABLE/VCR** switch to **"VCR"** (or **"CABLE"**).

3 While holding down **RECALL**, press the **Number** buttons to enter the three digit code number for your brand of VCR (or converter).

4 Point the Remote Control at the VCR (or at the converter) and press **POWER** to test the code number.

—If the number is correct, the VCR should turn on.

—If the VCR does not respond to the Remote Control, repeat steps 1 through 4 with another code number.

5 Reset the **TV/CABLE/VCR** switch to **"TV"** to control the TV.

Notes:

- You have to reprogram the Remote Control when you change its batteries.
- Some newer VCRs are capable of working on either of two remote codes. These VCRs have a switch labeled "VCR 1/VCR 2." If your VCR has this kind of switch, and does not respond to any of the code numbers for your VCR brand name, set the switch to the other position ("VCR 1" or "VCR 2") and reprogram the Remote Control.
- In some rare cases, you may not be able to operate your non-TOSHIBA equipment with the supplied Remote Control. This is because your equipment may use a code that is not provided with this Remote Control. In this case, please use the equipment's own remote control.

Programming the Remote Control (continued)

- The code numbers listed below were the most recent ones available at the time of printing. New code numbers may or may not have been added since printing.

VCR code table

BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER
Adventura	019	Fisher	065, 066, 073, 085,	MGN Technology ..	259
Aiko	297	123		Minolta	061, 124
Aiwa	019	Frontech	039	Mitsubishi	062, 080, 086, 094,
Akai	060, 068, 080, 125,	Fuji	052, 054	100, 192, 233, 261	
261		Funai	019	Motorola	054, 067
Akiba	091	Garrard	019	MTC	019, 259
Alba	039, 228, 297, 314	GE	054, 079, 084, 221	Multitech	019, 091
American High	054	GEC	100	Murphy	019
Amstrad	019	General	071	NEC	057, 059, 060, 069,
Anam	181	Go Video	251, 298	086	
Anitech	091	Goldstar	037, 056, 057	Neckermann	100
ASA	056, 100	Goodmans	019, 039, 056, 081,	Nesco	091
Asha	259	091, 297		Nikko	056
Asuka	056	Gradiente	019	Noblex	259
Audiovox	056	Graetz	060, 123	Nokia	060, 065, 123, 125,
Baird	019, 123	Granada	065, 100, 123	259	
Basic Line	039, 091, 297	Grandin	019, 056, 091	Nordmende	060
Beaumarck	259	Grundig	100	Oceanic	019
Bell & Howell	123	Harley Davidson	019	Olympus	054
Blaupunkt	053, 181	Harman/Kardon	057, 094	Optimus	056, 067
Brandt	206	Harwood	087, 091	Optonica	067, 081
Broksonic	140, 203, 230, 380	Hcm	091	Orion	140, 227, 228, 314
Bush	091, 228, 297	Headquarter	065	Osaki	019, 056, 091
Calix	056	Hi-Q	066	Otto Versand	100
Canon	054	Hinari	091, 227	Palladium	056, 091
Capehart	039	Hitachi	019, 060, 061, 084,	Panasonic	054, 096, 115, 181,
Carver	100	124, 254		244	
CCE	091, 297	Hypson	091	Penney	054, 056, 057, 059,
CGE	019	Imperial	019	061, 073, 259	
Cimline	091	Interfunk	100	Pentax	061, 084, 124
Citizen	056, 297	ITT	060, 065, 123, 125	Perdio	019
Clatronic	039	ITV	056, 297	Philco	054
Colt	091	JCL	054	Philips	054, 081, 100, 129
Condor	039	Jensen	060	Phonola	100
Craig	056, 066, 091, 259	JVC	027, 060, 086	Pilot	056
Crown	091, 297	Kaisui	091	Pioneer	086, 100
Curtis Mathes	054, 079	Kendo	125, 228	Portland	039
Cybernex	259	Kenwood	057, 060, 065, 086	Profitronic	259
Daewoo	039, 064, 065, 297	KLH	091	Proline	019
Dansai	091	Kodak	054, 056	protec	091
Daytron	039	Korpel	091	Pulsar	058
De Graff	061	Leyco	091	Pye	100
Decca	019, 100	Lloyd	019	Quarter	065
Dual	060	Loewe	056	Quartz	065
Dumont	019, 100, 123, 124	Loewe opta	100	Quasar	054, 096, 115
Dynatech	019	logik	091, 259	Quelle	100
Elcatech	091	Luxor	062, 065, 123, 125	Radio Shack	019, 056
Electrohome	056	LXI	056	Radiola	100
Electronic	019	M-Electronic	019	Radix	056
Electrohome	056	Magnavox	019, 054, 058, 100,	Randex	056
Emerex	051	129, 168		RCA	054, 061, 079, 084,
Emerson	019, 021, 056, 062,	Magnin	259	096, 115, 124, 125,	
080, 087, 140, 203,		Manesth	064, 091	168, 221	
227, 228, 230, 231,		Narantz	054, 057, 081, 100	RCA Unified	079
313, 314, 380		Marta	056	Realistic	019, 054, 056, 065,
ESC	297	Masushita	054	066, 067, 081, 085,	
Ferguson	060	Matsui	227, 228, 314	123, 259	
Fidelity	019	MEI	054	Rex	060
Finlandia	100, 123, 129	Memorex	019, 054, 056, 058,	Ricoh	053
Finlux	019, 061, 100, 123,	065, 066, 067, 123,		Roadstar	056, 091, 259, 297
124		259		Runco	058
Firstline	056, 062, 064, 091,	Memphis	091	Saba	060
228		Metz	181	Saisho	227, 228
		MGA	062, 080	Salora	062, 065, 125

Cable TV converter code table

BRAND NAME	CODE NUMBER
Samsung	064, 259
Sanky	058, 067
Sansui	060, 086
Sanyo	065, 066, 123, 259
SBR	100
Schaub Lorenz	019, 060
Schneider	019, 091, 100, 129
Scott	062, 064, 140, 203, 229, 230, 231
Sears	054, 056, 061, 065, 066, 073, 085, 123, 124
SEG	259
SEI	100
Seleco	060
Sentra	039
Sharp	067, 081
Shintom	091
Shogun	259
Siemens	056, 123
Silva	056
Singer	091
Sinudyne	100
Sontec	056
Sony	051, 052, 053, 054
STS	061
Sunstar	019
Sylvania	019, 054, 062, 100, 129
Symphonic	019
Tandy	019, 123
Tashiko	019
Tatung	019, 060, 100
Teac	019, 060
Technics	054, 181
Teknika	019, 054, 056, 071
Teleavia	060
Telefunken	060, 206
Tenosai	091
Tensai	019
Thomson	060
Thorn	060, 123
TMK	227, 259
Toshiba	060, 062, 064, 085, 229, 231, 385
Totevision	056, 259
Triumph	227
Untech	259
Universum	019, 056, 068, 100, 125
Vector	064
Vector research	057, 059
Victor	027, 060, 086
Video Concepts	059, 064, 080
Videosonic	259
Wards	019, 054, 061, 066, 067, 081, 091, 168, 231, 259
XR-1000	019, 054, 091
Yamaha	057, 060
Yamishi	091
Yokan	091
Yoko	039, 259
Zenith	052, 053, 058

BRAND NAME	CODE NUMBER
ABC	020, 022, 026, 030, 032, 033, 036, 066
Antronix	041
Archer	041, 058, 172
Belcor	075
Cable Star	075
Cabletenna	041
Cableview	041
Century	172
Citizun	172
Colour Voice	044, 050
Comtronics	059, 079
Contec	038
Eastern	021
Garrard	172
GC Electronics	035, 075
Gemini	034, 089
General Instrument	030
Hamlin	028, 039, 053, 278, 292
Hitachi	030
Hytex	026
Jasco	172
Jerrold	022, 030, 031, 033, 034, 043, 045, 066, 295
Macom	052
Magnavox	046
Memorex	019
Movie Time	175
NSC	089, 175
Oak	026, 038, 267
Panasonic	040, 126
Paragon	019
Philips	044, 046, 047, 048, 049, 050, 079, 172
Pioneer	042, 163
Popular Mechanics	419
Pulsar	019
PVP Stereo Visual Matrix	022
RCA	040
Regal	039, 278, 292
Regency	021
Rembrandt	030, 089
Runco	019
Samsung	059, 163
Scientific Atlanta	025, 027, 036, 296, 346
Signal	034, 059
Signature	030
SL Marx	059
Sprucer	040
Standard Components	174
Starcom	022, 034, 066
Stargate	034, 059
Starquest	034
STS	175
Sylvania	020
Teleview	059
Texcan	020

BRAND NAME	CODE NUMBER
Tocom	031, 032, 078
Toshiba	019
Tusa	034
Unika	041, 172
United Artists	026
United Cable	022
Universal	041, 058, 075, 096, 172, 210
Viewstar	046, 079, 230
Zenith	019

Quick Reference Menu Guide

- We recommend that you familiarize yourself with these procedures for using the Menu function.

Menus and functions

1

Press **MENU** to call up an on-screen menu.

2

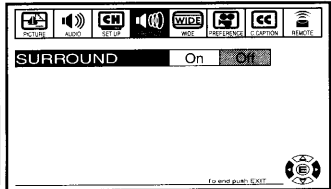
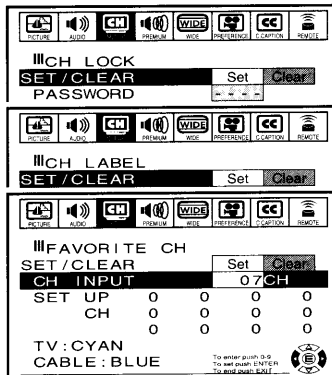
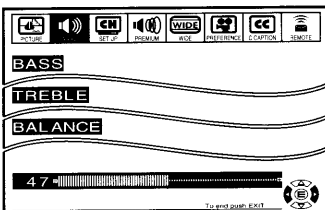
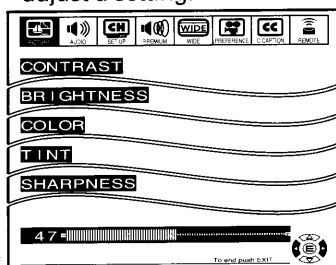
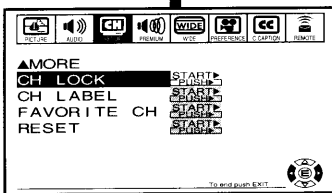
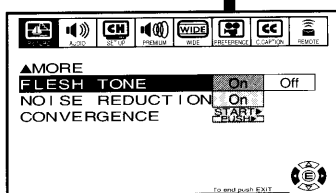
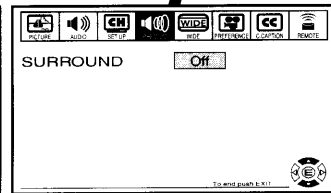
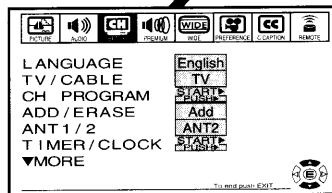
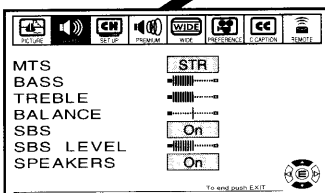
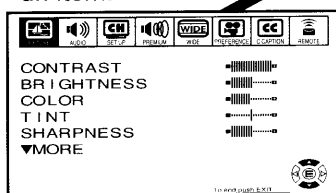
Press **<** or **>** to select the menu.

3

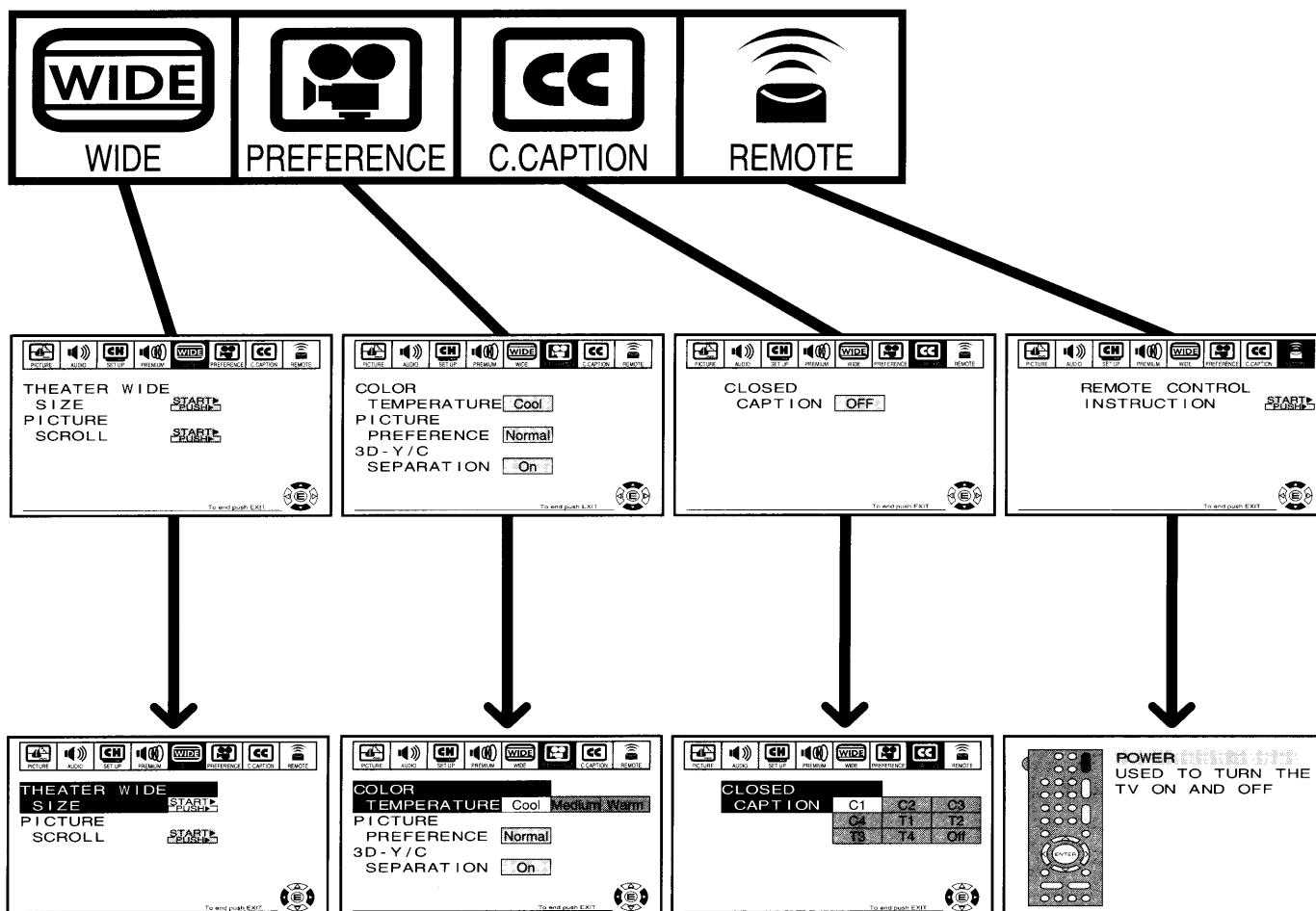
Press **^** or **v** to select an item.

4

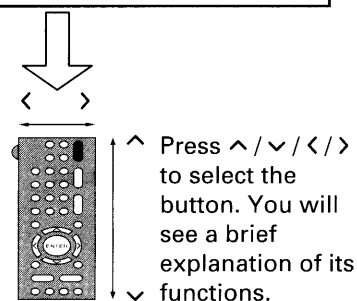
Press **<** or **>** to select or adjust a setting.



This mark indicates which button you should press next.

**Notes:**

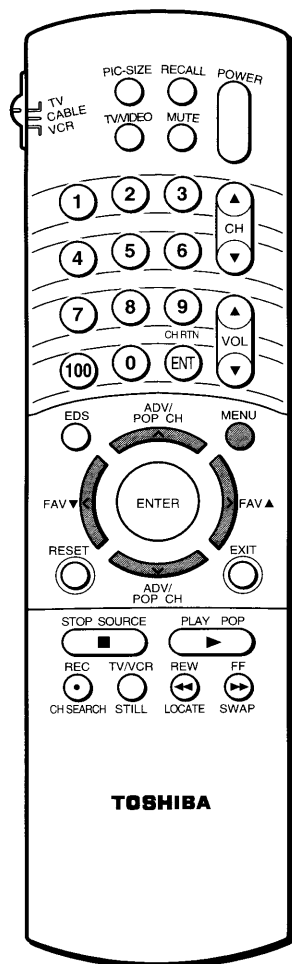
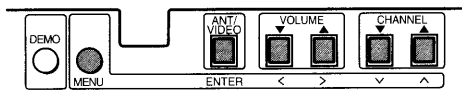
- Use the **ENTER** button to activate the function settings in the SET UP menu after step 4.
- The main menu display will disappear automatically if you do not press a button within 15 seconds, and the other displays will disappear within 6 seconds.
- If you want to close all the on-screen displays instantly, press the **EXIT** button on the Remote Control.
- The **^**/**∨** buttons on the TV function as the **CHANNEL** **▼**/**▲** buttons when no menu display is on the screen.
- The **<**/**>** buttons on the TV function as the **VOLUME** **▼**/**▲** buttons when no menu display is on the screen.
- The **<**/**>** buttons on the Remote Control function as the **FAV** **▼**/**▲** buttons when no menu display is on the screen.



Selecting the Antenna Input

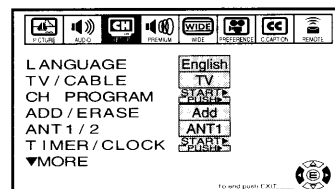
- Your TV has two separate antenna inputs (ANT 1 and ANT 2) that allow you to connect two different signal sources, if desired.

To select the antenna input

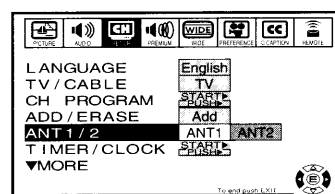


Using the SET UP menu

- Press **MENU**, then press **<** or **>** until the SET UP menu appears.



- Press **∇** (or **▲**) until "ANT 1/2" is highlighted.



- Press **<** or **>** to select "ANT 1" or "ANT 2."

Using the ANT/VIDEO button (on the TV)

Each time you press this button, the ANT 1, VIDEO 1, VIDEO 2, VIDEO 3 or ANT 2 mode will be selected in order.

The selected mode will be displayed in purple to show which signal source you are watching.

Press the button until "ANT 1" or "ANT 2" is displayed in purple to match the antenna terminal you want to use.

VIDEO 1	ANT 1
VIDEO 2	ANT 2
VIDEO 3	

TO SELECT PUSH ANT/VIDEO

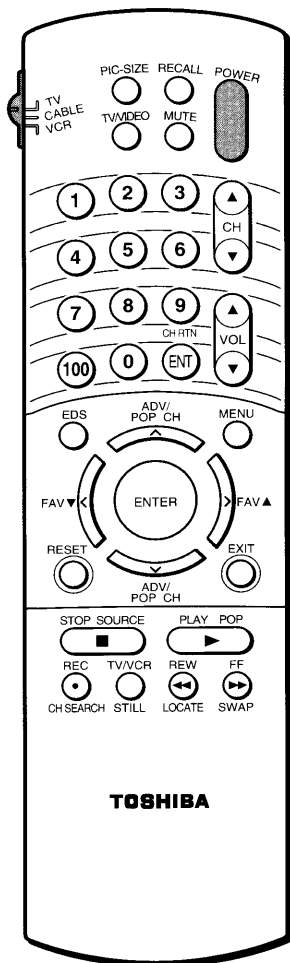
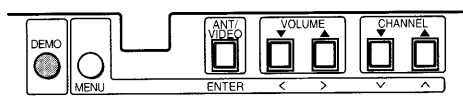
Note:

This button functions as the **ENTER** button while the menu is on the screen.

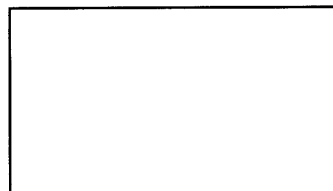
Turning the TV On/Off

To turn the TV on/off

First set the **TV/CABLE/VCR** switch on the Remote Control to "TV."

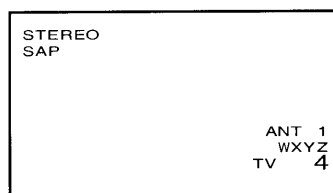


- 1 Press **POWER** on the Remote Control or the TV.
The picture will appear in a few seconds.



- 2 The following on-screen information will be displayed for a few seconds.

- Antenna input (when in TV mode).
- Channel label (if previously preset).
- Channel number or VIDEO mode selected.
- STEREO or SAP audio status.



- 3 To turn the TV off, press **POWER** again.

Auto-Power-Off

If an empty channel is selected, or the TV broadcast for the day is finished, the TV will automatically turn off after about 15 minutes. This **Auto-Power-Off** feature does not operate in the VIDEO mode.

Last Mode Memory

If the power supply is cut off while you are watching the TV, the **Last Mode Memory** feature automatically turns on the TV when the power is restored. If you know the power is going to be cut off, or you are leaving home for a long time, remove the power plug from the wall outlet to prevent the TV from turning on in your absence.

Demonstration mode

When you press **DEMO**, the TV will automatically display a variety of its on-screen menus and special features. This function is provided for demonstration purposes only.

Press **DEMO**.

The on-screen demonstration will start after about 4 seconds.

TOSHIBA COLOR TV

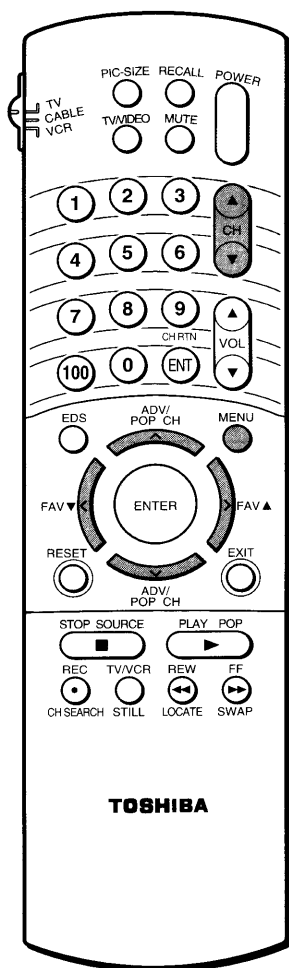
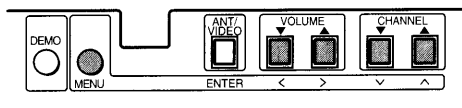
- TECHNOLOGY
- PERFORMANCE
- EXCITEMENT

To stop the on-screen demonstration
Press **DEMO** again or press **Exit** or **Recall** on the remote control.

Programming Channel Memory

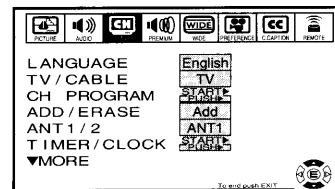
- The channel memory is the list of TV channel numbers the TV tunes in when you press the **CHANNEL ▲/▼** button. **First, use the TV/CABLE and CH PROGRAM functions to preset all active channels in your area automatically.** If necessary, arrange the preset channels with the ADD/ERASE function so you tune into only the desired channels.

TV/CABLE and CH PROGRAM functions

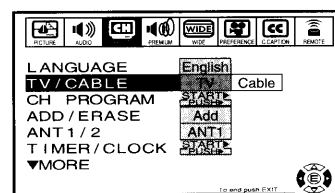


TV/CABLE function

- Press **MENU**, then press **<** or **>** until the SET UP menu appears.



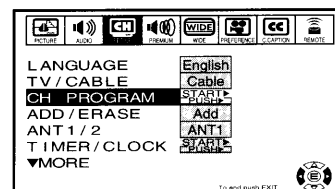
- Press **▼** (or **▲**) until "TV/CABLE" is highlighted.



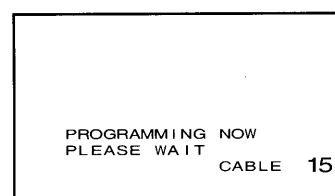
- Press **<** or **>** to select "TV" or "Cable" whichever you use.

CH PROGRAM function

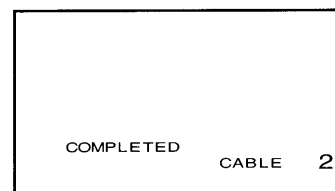
- Select "CH PROGRAM" following steps 1 and 2 above.



- Press **<** or **>** to start channel programming. The TV automatically cycles through all TV or CABLE channels depending on the mode selected, storing received channels in the channel memory.

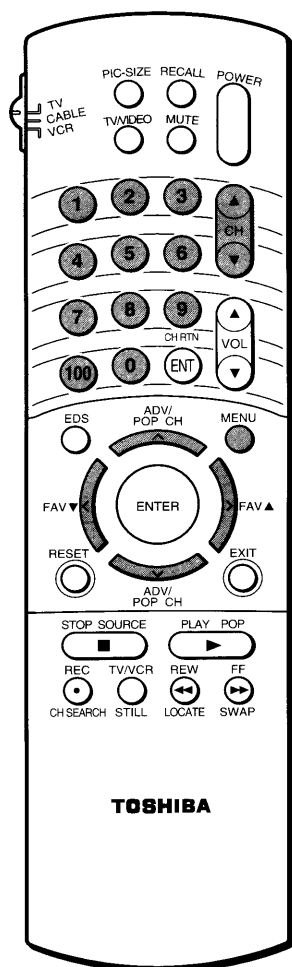
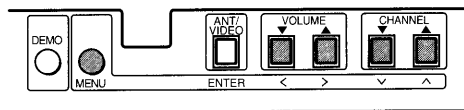


- When channel programming is complete, the message at the right appears.



- Press **CHANNEL ▲/▼** to make sure channel programming has been done properly.

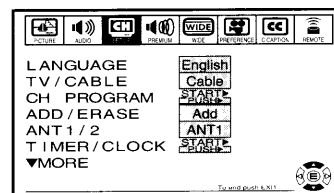
ADD/ERASE function



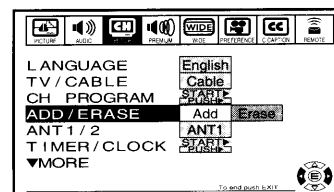
After performing the CH PROGRAM function, you can add or erase specific channels.

- 1 Select the channel to erase using the **CHANNEL ▲** or **▼** button, or select the channel to add with the **Channel Number** buttons.
See page 25 on how to select channels.

- 2 Press **MENU**, then press **<** or **>** until the SET UP menu appears.



- 3 Press **▼** (or **▲**) until "ADD/ERASE" is highlighted.



- 4 Press **<** or **>**.

To erase the channel

Press **<** or **>** to select "Erase."
The channel will be erased from the memory.

To add the channel

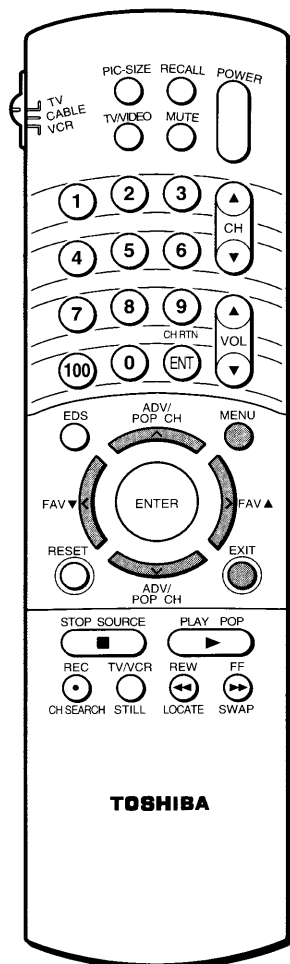
Press **<** or **>** to select "Add."
The channel will be memorized.

- 5 Repeat steps 1 through 4 for other channels.

Aligning the colors

- This projection TV uses three separate TV tubes: a red one, a green one, and a blue one. The red, green and blue images are projected onto the screen where they converge to form a full color picture. You can see a clear picture only when they converge correctly.
- Convergence may drift over time or if you move the TV. If you can see clear images on the screen, skip this procedure.

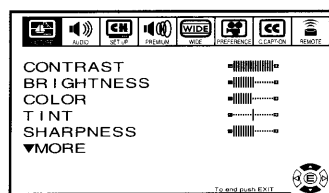
To align the colors



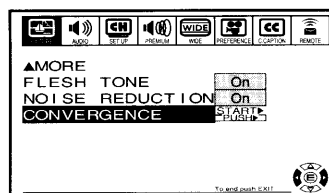
This adjustment should be made after the TV has been on for at least 30 minutes.

To check and align the colors

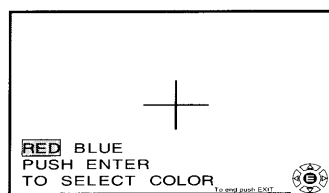
- 1 Press **MENU**, then press **<** or **>** until the PICTURE menu appears.



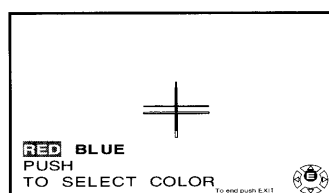
- 2 Press **^** (or **v**) until "CONVERGENCE" is highlighted.



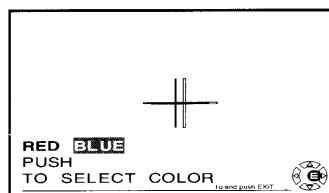
- 3 Press **<** or **>** to display the CONVERGENCE menu. If alignment is correct, there will be one vertical and one horizontal white line.



- 4 If you see separate colored lines, you have to align the colors. Press **ENTER** to select "RED" or "BLUE." The selected mode is highlighted.



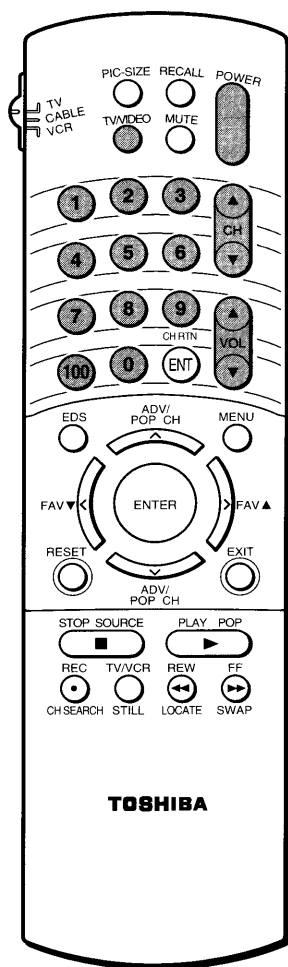
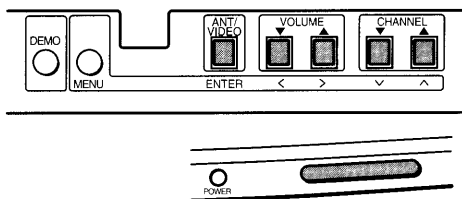
- 5 Press the **^** (up)", **v** (down)", **<** (left)" and **>** (right)" buttons to converge the red or blue line into the green line. When color convergence is correctly adjusted, you will see two single white lines.



- 6 Press **EXIT** to close the CONVERGENCE menu.

Watching TV Programs

To watch a TV program



1 Press **POWER** to turn on the TV.

2 Select the desired program in one of the following two ways.

To scan the memorized channels in numerical sequence

Press **CHANNEL ▲** to select the next higher channel.

Press **CHANNEL ▼** to select the next lower channel.

Press the button again to select the next memorized channel.

To select a channel directly

Press the **Channel Number** buttons (0 – 9 and 100).

To select channel 4, press "4" (or press "0" and "4" in order).

To select channel 38, press "3" and "8" in order.

To select channel 125, press "100," "2," and "5" in order.

3 Adjust the sound volume with the **VOLUME ▲/▼** buttons on the Remote Control or the TV.
Press **▲** to increase the volume; **▼** to decrease the volume.

4 To turn off the TV, press **POWER** again.

If you cannot select certain channels (either TV broadcast or CABLE channels)

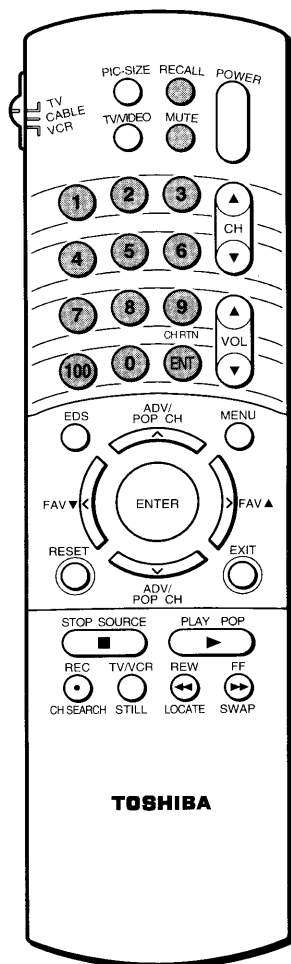
Check to see if the TV/CABLE function is properly set. See page 22.

Notes:

- The **TV/VIDEO** button or **ANT/VIDEO** button is used to input signals from other sources such as VCRs or Laser Disc Players connected to this TV. See page 54 for details.
- The **CHANNEL ▼/▲** on the TV function as the menu **▼/▲** buttons while a menu is on the screen.
- The **VOLUME ▼/▲** on the TV function as the menu **</>** buttons while a menu is on the screen.

Convenient Remote Functions

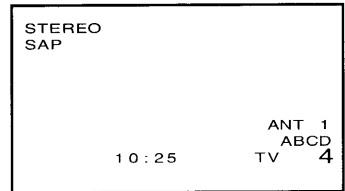
To use On-screen displays/Sound muting/Channel return



To display on-screen information

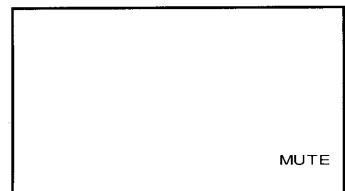
Press **RECALL** to display the following on-screen information.

- Antenna input (when in TV mode)
- Channel label (if previously preset)
- Channel number or VIDEO mode selected
- Time (if the clock has been set)
- STEREO or SAP audio status



To mute the sound

- 1 Press **MUTE** to mute the sound immediately without affecting the picture.



- 2 To restore the sound, press **MUTE** again.

Note:

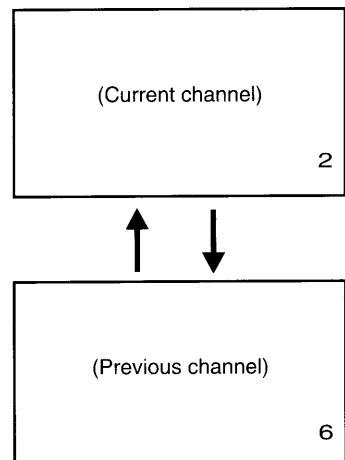
When the **MUTE** button is pressed, the Closed Captioned feature "C1" is activated. To deactivate it, press the **MUTE** button again. This feature only functions when the Closed Caption mode is set to "Off." (See page 48.)

To return to the previously viewed channel

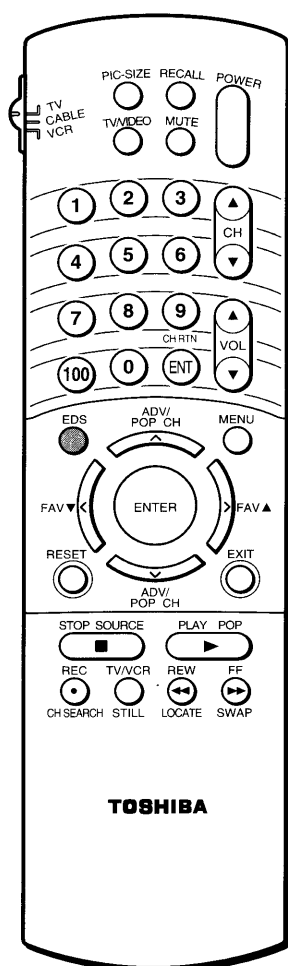
Using this function, you can watch two channels alternately.

- 1 Select the first channel you want to watch.
- 2 Select the other channel with the **Channel Number** buttons.
- 3 Press **CH RTN**.
The previous channel returns.

Each time you press **CH RTN**, the TV will switch back and forth between the two channels.

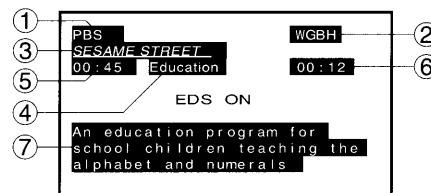


To display EDS information



Press **EDS** to display the following EDS (Extended Data Service) information for about 30 seconds.

- Network name ①
- Call letters ②
- Program name ③
- Program type ④
- Program length ⑤
- Elapsed time in show ⑥
- Program description ⑦



Some of the above information may not be displayed.

If the TV program you are watching does not include EDS information

Only "EDS ON" will be displayed for about 4 seconds when you press the EDS button.

EDS ON

To close the EDS display

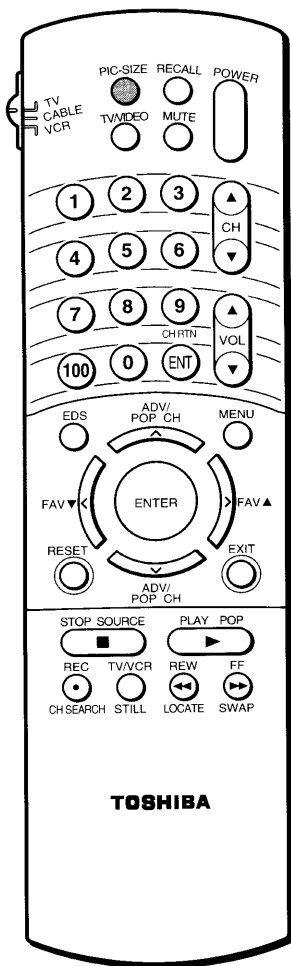
Press **EDS** again.

EDS OFF

Enjoying Wide Pictures

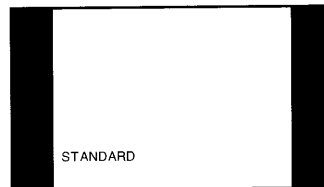
- You can watch programs with the usual TV picture aspect ratio of 4:3 as well as programs in a variety of letter box formats.

To select the picture size



Press **PIC-SIZE** repeatedly. "STANDARD," "THEATER WIDE" or "FULL" mode will be selected in order.

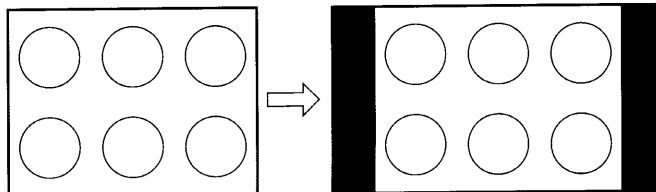
Example: STANDARD mode



STANDARD

This mode shows pictures in conventional ratio of 4:3.

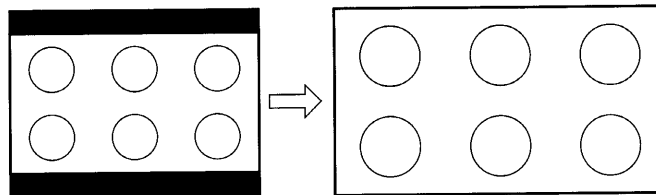
Viewing a normal program



THEATER WIDE

This mode shows pictures magnified to fill the screen.

Viewing a normal program or letter box program



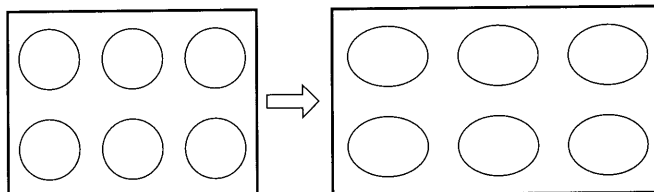
Note:

If you select this mode for normal programs, the picture at the top and bottom of the screen will be hidden. If subtitles are difficult to read, scroll the picture. (See page 30.)

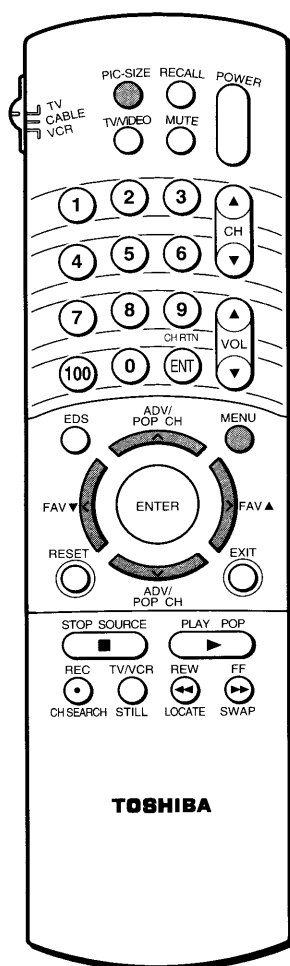
FULL

This mode shows the pictures stretched to fill the screen.

Viewing a normal program

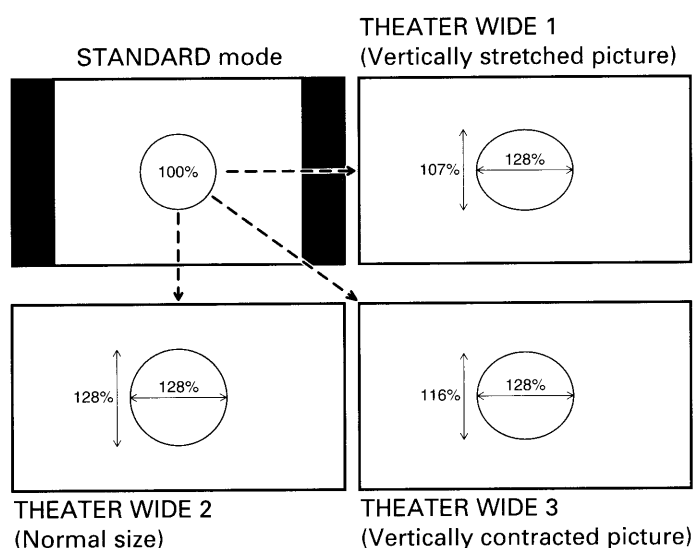
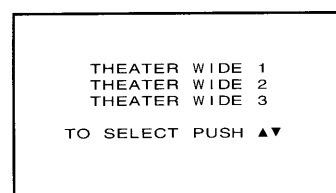
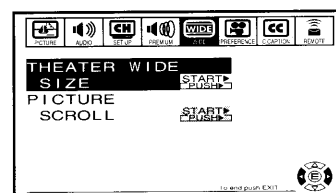
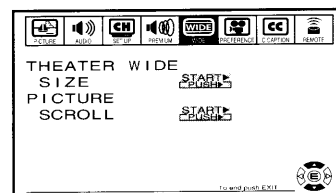


To adjust the height and the vertical position of the THEATER WIDE mode picture



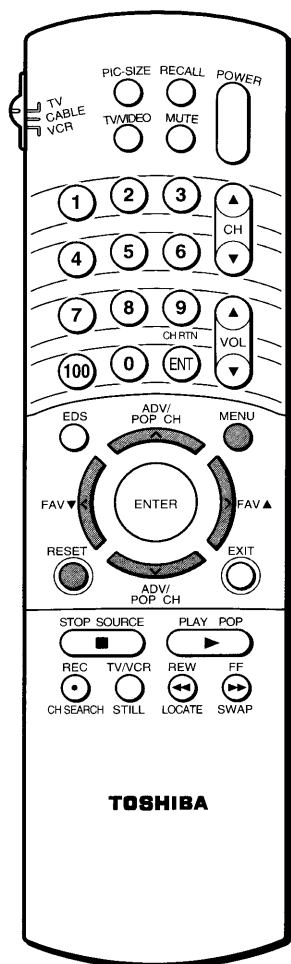
To adjust the height of the picture

- 1** Press **PIC-SIZE** to select the THEATER WIDE mode.
- 2** Press **MENU**, then press **<** or **>** until the WIDE menu appears.
- 3** Press **^** or **v** until "THEATER WIDE SIZE" is highlighted.
- 4** Press **<** or **>**. Then press **^** or **v** to select the appropriate picture height from the following three modes.



Enjoying Wide Pictures (continued)

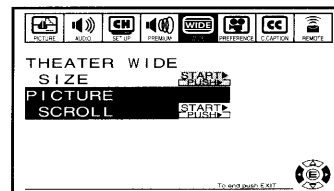
To adjust the height and the vertical position of the THEATER WIDE mode picture (continued)



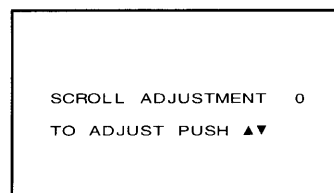
To adjust the vertical position of the picture

1 Select THEATER WIDE 2 or 3 following the procedure on page 29.

2 Select the WIDE menu, then press $\wedge$ or $\vee$ until "PICTURE SCROLL" is highlighted.

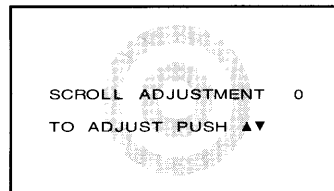


3 Press $\leftarrow$ or $\rightarrow$ to select the SCROLL ADJUSTMENT mode.

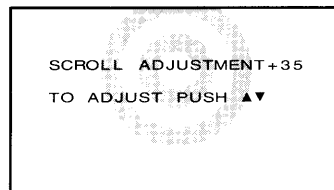


4 Press $\wedge$ or $\vee$ to adjust the vertical position of the picture.

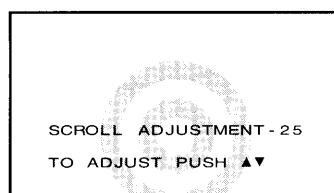
Normal (center) position



To raise the picture, press $\wedge$.



To lower the picture, press $\vee$.



Note:

You can only adjust the vertical position in WIDE 2 and WIDE 3.

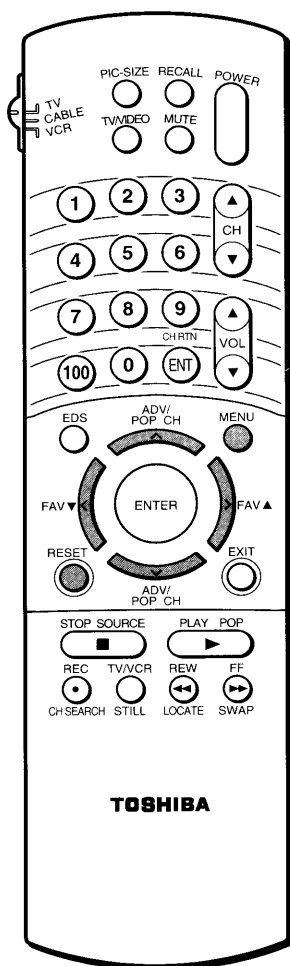
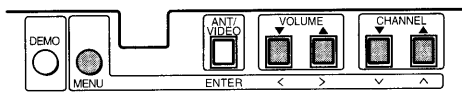
WIDE 1: Not adjustable

WIDE 2: +45 — -20

WIDE 3: +30 — -35

Controlling the Picture

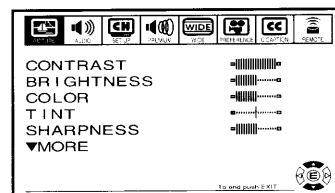
To adjust the picture



To adjust the picture quality

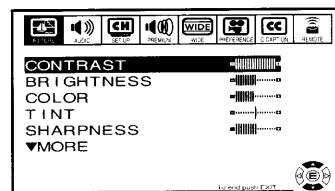
You can adjust the picture quality (CONTRAST, BRIGHTNESS, COLOR, TINT, and SHARPNESS) to suit your personal preference.

- 1 Press **MENU**, then press < or > until the PICTURE menu appears.

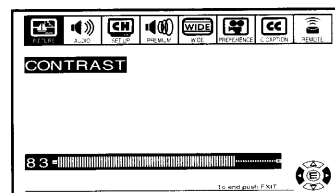


- 2 Press v (or ^) until the item you want to adjust is highlighted.

Example: CONTRAST adjustment mode display



- 3 Press < or > to adjust the level.



Item	Pressing	
	<	>
CONTRAST	lower	higher
BRIGHTNESS	darker	lighter
COLOR	weaker	stronger
TINT	reddish	greenish
SHARPNESS	softer	sharper

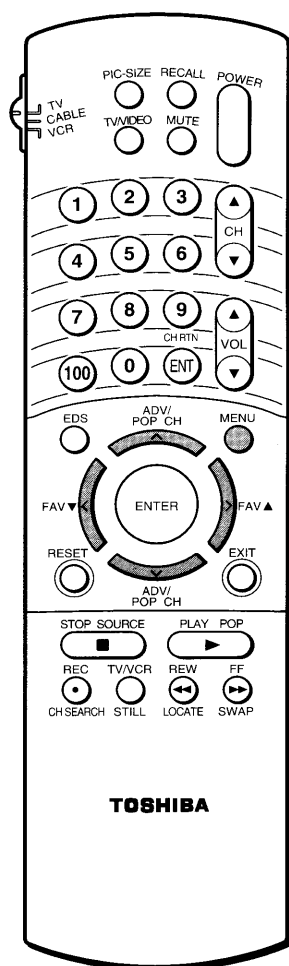
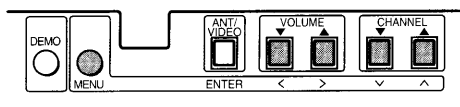
When you adjust any of the five PICTURE items, the new setting will be stored in the "Memory." (See page 32.)

Note:

You can reset the PICTURE setting to the factory preset status by pressing the **RESET** button. (See page 33.) At this time, the TV will return to the Normal mode in the PICTURE PREFERENCE function. (The settings you have adjusted remain in the Memory mode.)

Controlling the Picture (continued)

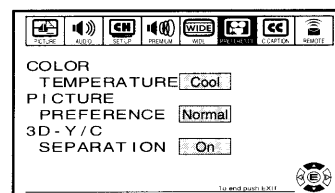
To adjust the picture (continued)



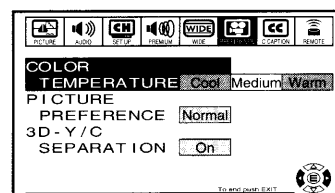
To select the color temperature

These selections change the appearance of gray and white tones of the picture.

- 1 Press **MENU**, then press **<** or **>** until the PREFERENCE menu appears.



- 2 Press **^** or **v** until "COLOR TEMPERATURE" is highlighted.



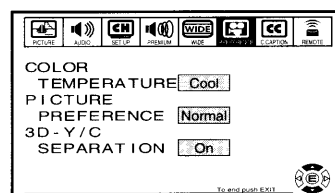
- 3 Press **<** or **>** to select the color temperature you want.

Cool: Bluish
Medium: Neutral
Warm: Reddish

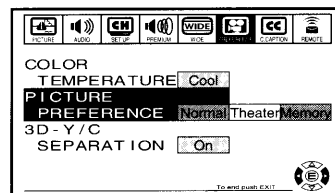
To select the picture preference

You can select the type of picture you want from three preset picture modes (Normal, Theater, and Memory).

- 1 Select the PREFERENCE menu.



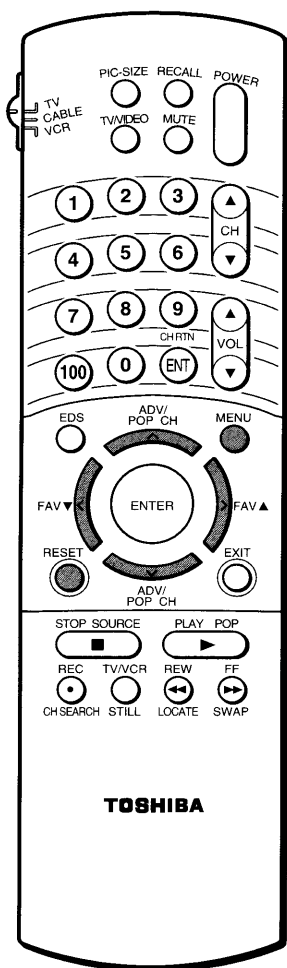
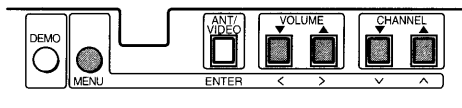
- 2 Press **^** or **v** until "PICTURE PREFERENCE" is highlighted.



- 3 Press **<** or **>** to select the mode you want.

Mode	Picture quality
Normal	the picture quality preset at the factory
Theater	movie-like picture setting
Memory	the picture quality you set (See page 31.)

To adjust the picture (continued)

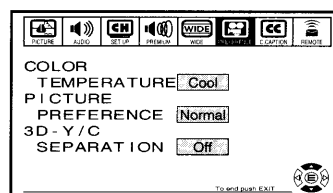


To activate the 3D-Y•C SEPARATION function

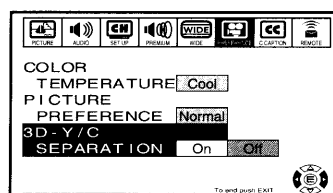
3D-Y•C means "3-Dimensional-luminance signal (Y)•chrominance signal (C) separation circuit". It separates Y and C signals to prevent them from interfering with one another, thereby improving picture (especially color) quality.

Select "3D-Y•C SEPARATION ON" for optimum picture quality.

- 1 Press **MENU**, then press **<** or **>** until the PREFERENCE menu appears.



- 2 Press **^** or **v** until "3D-Y•C" is highlighted.



- 3 Press **<** or **>** to select "On."

Note:

This feature will automatically be set to "On" when you turn the TV on.

RESET function

To reset the **PICTURE** and **AUDIO** adjustments to the factory preset status (maximum CONTRAST and all other adjustments centered) Press **RESET**, or select RESET in the SET UP menu with **^** or **v**, then press **<** or **>**. (See page 18.)

The RESET function also performs the following adjustments.

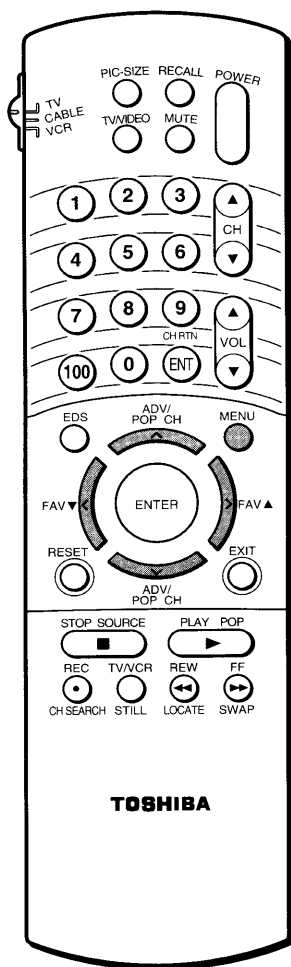
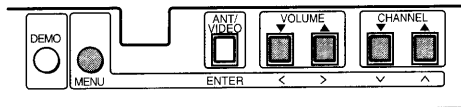
- COLOR TEMPERATURE Cool
- PICTURE PREFERENCE Normal
- NOISE REDUCTION Off



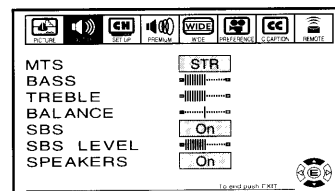
Controlling the Sound

- You can adjust the sound quality (BASS, TREBLE and BALANCE) to suit your personal preference.

To adjust the sound

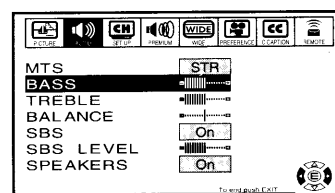


- Press **MENU**, then press **<** or **>** until the **AUDIO** menu appears.

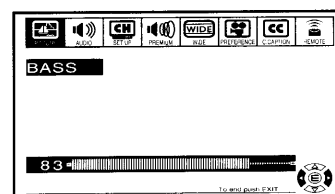


- Press **∇** (or **▲**) until the item you want to adjust is highlighted.

Example: Adjusting "BASS"



- Press **<** or **>** to adjust the level.

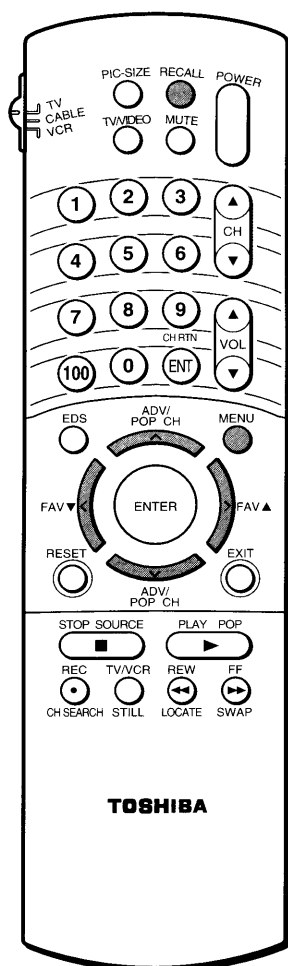
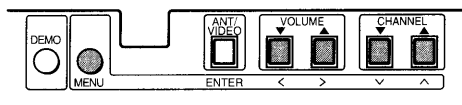


Item	Pressing	
	<	>
BASS	weaker	stronger
TREBLE	weaker	stronger
BALANCE	decreases the right channel	decreases the left channel

Selecting Stereo and SAP Broadcasts

- The MTS (Multi-channel TV Sound) feature allows you to improve your TV viewing with high fidelity stereo sound. MTS also provides for an extra audio channel, SAP (Second Audio Program), used to transmit a second language or other audio information.

To listen to Stereo/SAP broadcasts



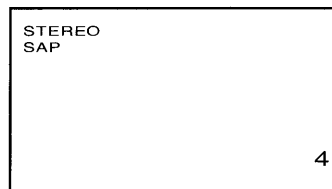
If the stereo sound is noisy

If a broadcast signal is not strong enough, and noise-free stereo sound is not available, select "MONO" in the MTS menu.

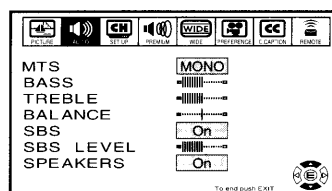
The noise should be reduced.

To listen to stereo sound

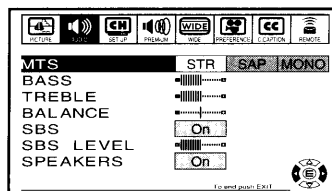
When the TV receives a stereo broadcast, the word "STEREO" (or "SAP") is displayed on the screen. It is also displayed whenever the TV is turned on, a channel is selected, or the **RECALL** button is pressed.



- Press **MENU**, then press **<** or **>** until the AUDIO menu appears.



- Press **>** (or **<**) until "MTS" is highlighted.



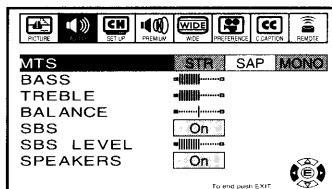
- Press **<** or **>** to select "STR." If a stereo broadcast is received, "STR" will be displayed in yellow.

Normally this function can be left in the stereo mode "STR". Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.

To listen to a second language

- Follow steps 1 and 2 above.

- Press **<** or **>** to select "SAP". You will hear only the second language from the left and right speakers.



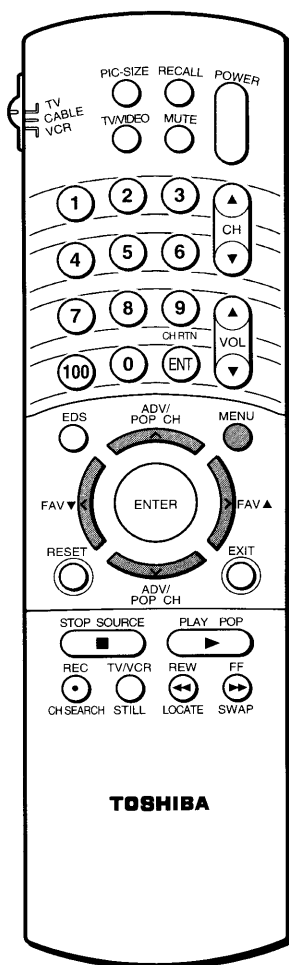
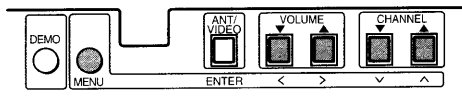
Notes:

- Be sure to select the "STR" mode if the broadcast is in stereo.
- The MTS function is not available while in VIDEO mode.

Enhancing the Surround Sound Effect

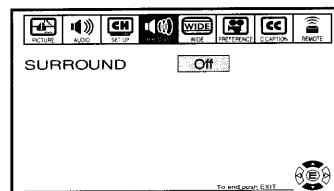
- This TV allows you to activate or deactivate the stereo surround effect.

To activate the Surround sound function

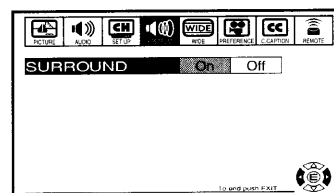


- 1 Select the "STR" (stereo) mode following steps 1 through 3 on the previous page.

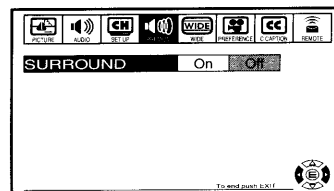
- 2 Press **MENU**, then press < or > until the AUDIO menu appears.



- 3 Press ^ or v until "SURROUND" is highlighted.



- 4 Press < or > to select "On."



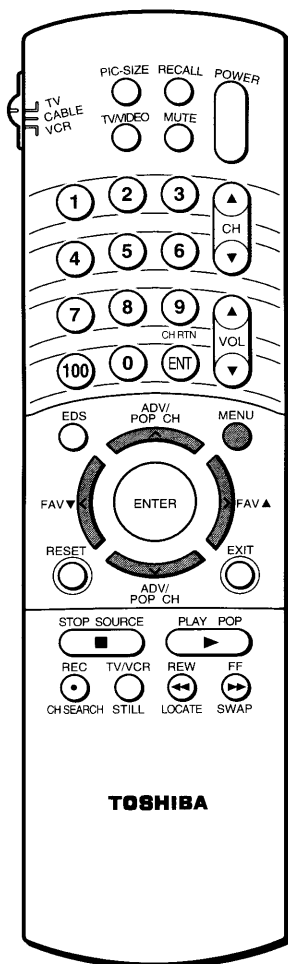
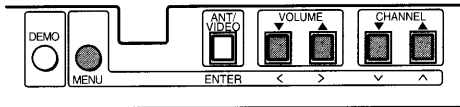
To deactivate the Surround sound function

Select "Off" in step 4 above.

Note:

Normally you can leave the MTS function set to "STR," and the SURROUND sound function set to "On." The TV will automatically produce either Surround sound stereo or monaural, whichever is broadcast.

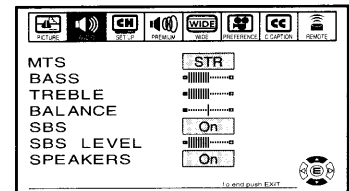
To operate the Sub-Bass System



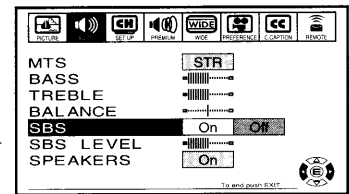
TOSHIBA

The Sub-Bass System allows you to improve bass performance (even when the sound volume is low).

- 1 Press **MENU**, then press **<** or **>** until the AUDIO menu appears.

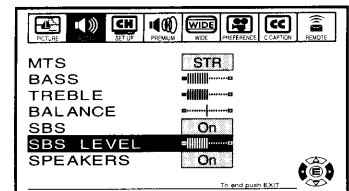


- 2 Press **^** or **v** until "SBS" is highlighted.

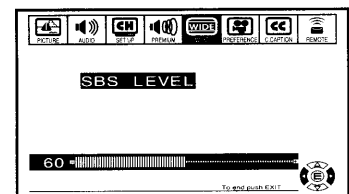


- 3 Press **<** or **>** to select "On."

- 4 Press **v** until "SBS LEVEL" is highlighted.



- 5 Press **<** or **>** to adjust the SBS level.



To deactivate the Sub-Bass System function
Select "Off" in step 3 above.

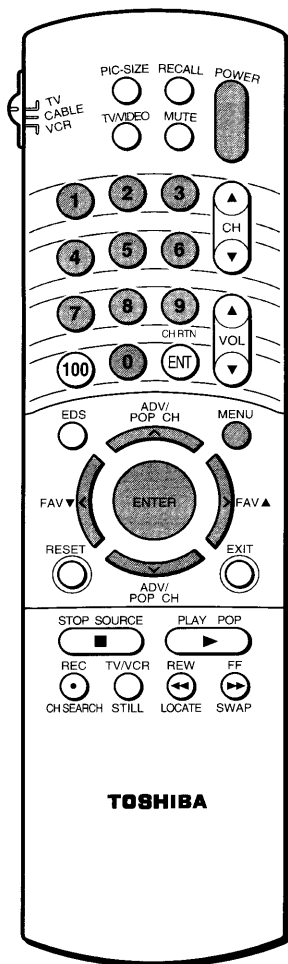
Note:

The Sub-Bass System signal does not pass through the "VARIABLE AUDIO OUTPUT" jacks. (See page 59.) However, the above on-screen displays will appear when the buttons are pressed.

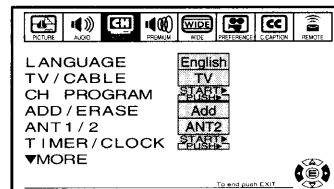
Setting the OFF Timer and the Clock

- With the OFF timer, you can set the TV to turn off automatically after a pre-determined period of time (in 10 minute increments, up to 180 minutes).

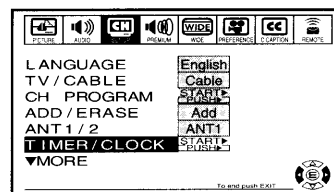
To set the OFF timer (Sleep timer)



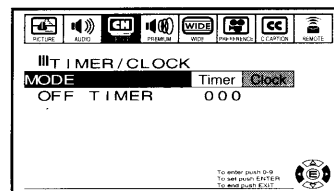
- Press **MENU**, then press < or > until **SET UP** menu appears.



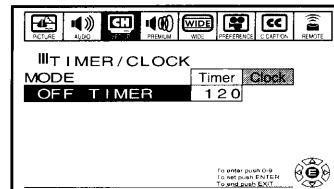
- Press ∇ or ▲ until **"TIMER/CLOCK"** is highlighted.



- Press > or < to display the **TIMER / CLOCK** menu. Then select **"Timer."**



- Press ∇ or ▲ until **"OFF TIMER"** is highlighted, then enter the length of time you want the TV to stay on with the **Number buttons**.



Example:

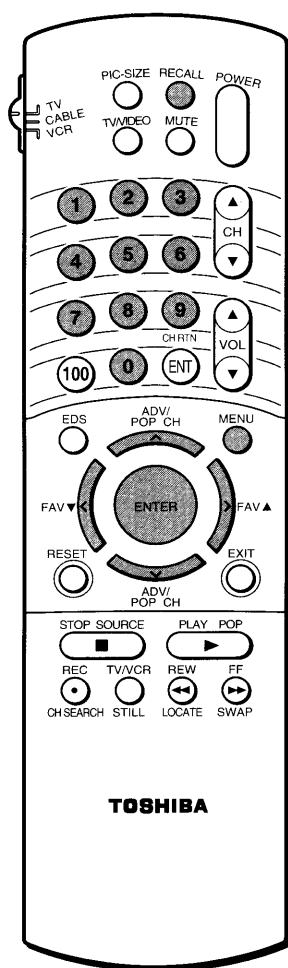
- 120 minutes
Press 1, then 2.
- 30 minutes
Press 0, then 3.

- Press **ENTER** to start the timer.

To cancel the OFF timer

Press **POWER** twice, once to turn the TV off, and once to turn it on again.

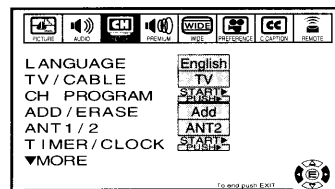
To set the clock



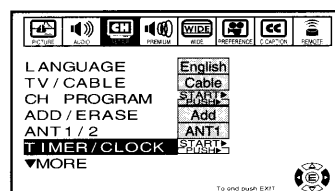
Note:

If the power source for the TV is interrupted (i.e., AC cord unplugged or power failure), the clock will have to be reset. (The time display will show "00:00.")

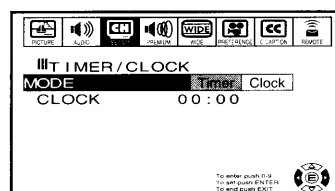
1 Press **MENU**, then press **<** or **>** until **SET UP** menu appears.



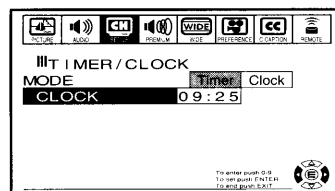
2 Press **↓** or **↑** until **"TIMER/CLOCK"** is highlighted.



3 Press **<** or **>** to display the **TIMER/ CLOCK** menu. Then select **"Clock."**



4 Press **↑** or **↓** until **"CLOCK"** is highlighted, and enter the correct time with the **Number buttons**. The remaining number(s) to be adjusted will flash continuously.



Example:

- To set 9:25 a.m. Press 0, 9, 2 and 5.
- To set 12:06 p.m. Press 1, 2, 0 and 6

The clock operates on a 12 hour-cycle.

5 Press **ENTER** to start the clock.

To monitor the time
Press **RECALL**.

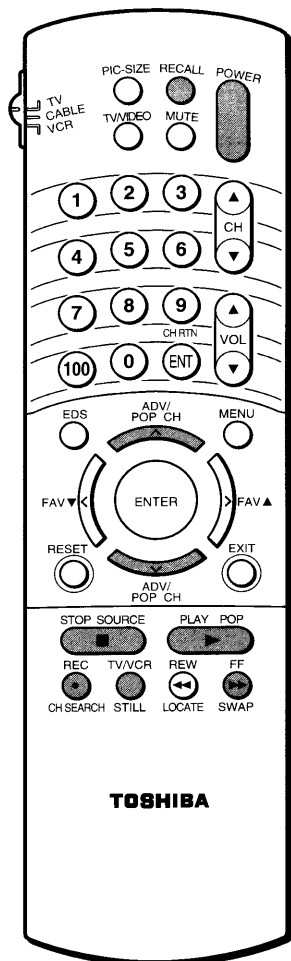
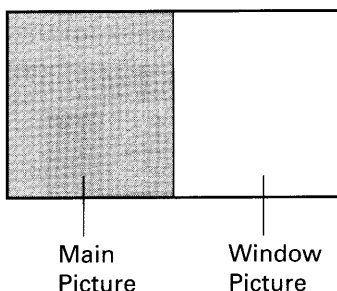
Double-Window Function

- This TV is capable of displaying two pictures simultaneously. This is called the Double-Window function or POP (Picture out Picture) function. A TV broadcast picture, or a picture from an external source such as a VCR, can be displayed as a window picture.

To display a window picture

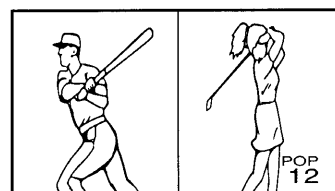
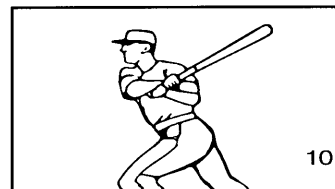
Note:

Signal sources input through the ANT-2 terminal cannot be displayed as a window picture.



To display a TV broadcast picture as a window picture

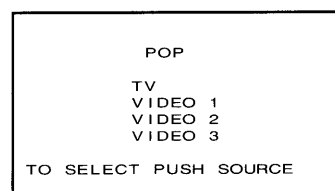
- 1 Turn on the TV and select the desired program.
- 2 Press **POP** once to display a window picture. Each picture will be horizontally contracted.
- 3 Press **POP CH** ^ or v to select the desired program for the window picture.
- 4 To turn off the window picture, press **POP** again.



To display a picture from an external source as a window picture

Connect the external source equipment for the window picture. (For connections, see pages 54 – 57.)

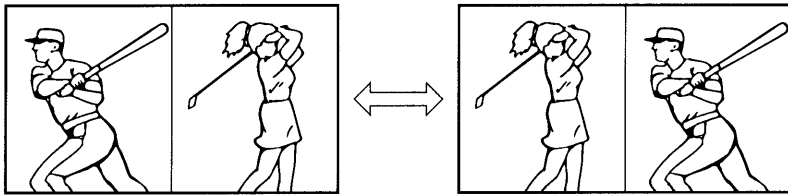
- 1 Turn on the TV, and select the desired program.
- 2 Press **POP** to display a window picture.
- 3 Press **SOURCE** repeatedly to select the input source (TV, VIDEO 1, VIDEO 2 or VIDEO 3) for the window picture. The selected mode will be highlighted.



To use advanced functions

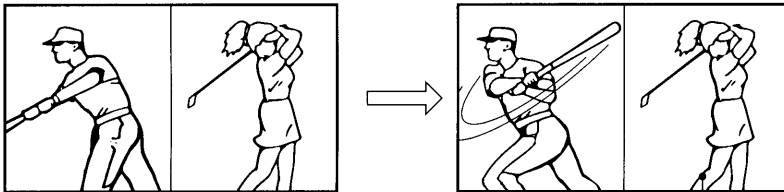
To switch the main and window pictures

Press **SWAP** while the window picture is displayed. The main and window pictures will switch. To switch them again, press **SWAP** again.



To freeze the window picture

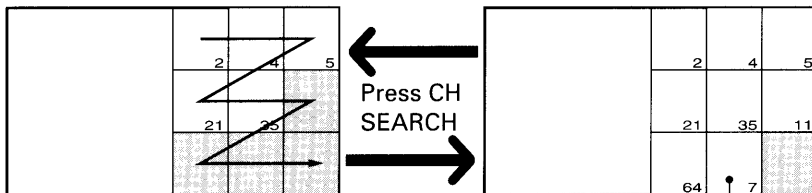
Press **STILL** while the window picture is displayed. The window picture will become a still picture. To return it to a moving picture, press **STILL** again.



Still picture

To use channel search function

Press **CH SEARCH** to scan the channels programmed in the TV memory.



Moving picture

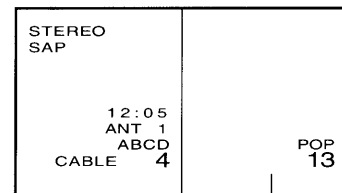
The 9-picture multi-search will start. To stop searching, press **CH SEARCH** again. You can watch your favorite channel as a moving picture. To continue searching, press **CH SEARCH** again. To cancel the channel search function, press **POP**.

CAUTION:

Avoid displaying stationary images on your TV screen for an extended period of time. Stationary patterns generated by the POP display, computer displays, videogames, stock market reports etc. can become permanently ingrained on the picture tube. This damage is not protected by your warranty as it is the result of misuse. If you use your TOSHIBA Television to display still images, it is always advisable to reduce the brightness and contrast settings. Never leave a POP display, computer display or videogame unattended.

Notes:

- When the color difference input jacks (Cr, Cb) are connected, the POP function is restricted as follows:
When the main picture is in "TV" mode, "VIDEO 2" mode cannot be selected as a window (POP) picture. When the main picture is in "VIDEO 2" mode, the POP button is not available.
- If you press the **RECALL** button while the window picture is on the screen, the following information will be displayed.

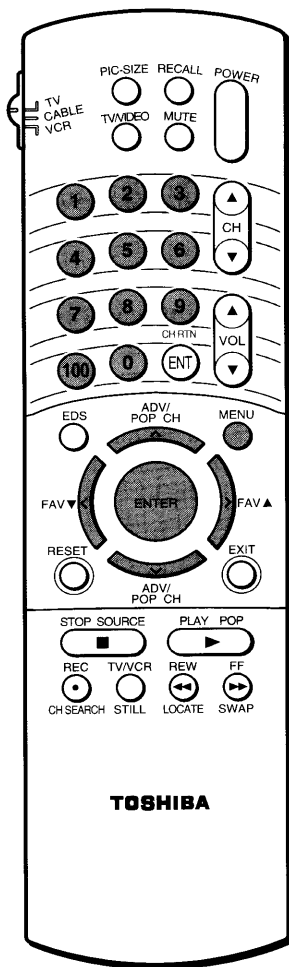


Window Picture Information

Locking Channels

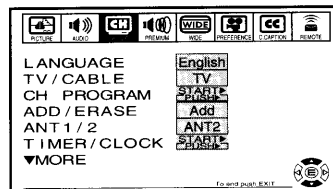
- With this function, you can lock out specific channels by entering your own 4-digit code. The TV will not be able to tune to those channels for the next 24 hours, unless you enter the code. This TV has 8 memory spaces total — 4 for TV mode and 4 for CABLE mode.

To lock out channels

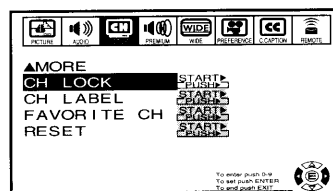

Note:

If a different code number is used to lock out a channel, the last one has priority over the preceding ones.

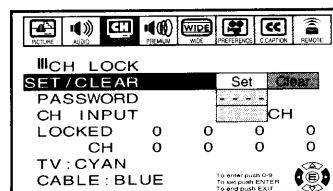
- Press **MENU**, then press **<** or **>** until the SET UP menu appears.



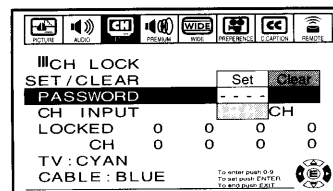
- Press **^** (or **v**) until "CH LOCK" is highlighted.



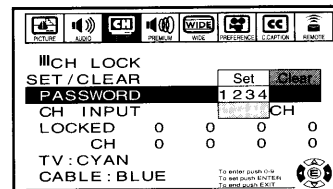
- Press **<** or **>** to display the CH LOCK menu. "SET/CLEAR" will be highlighted. Press **<** or **>** to select "Set."



- Press **v** until "PASSWORD" is highlighted.



- Press the **Number buttons** (0-9) to enter a 4-digit code. The numbers you enter will replace the dashes in the display. **Pick a number that is easy to remember.**

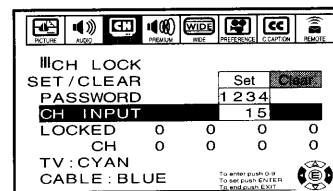


Example: To enter "1234"

Press 1, 2, 3, and 4 in order.

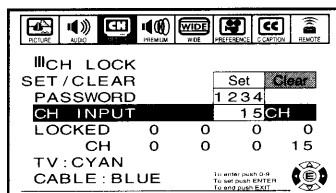
1 ----> 12 ----> 123 ----> 1234

- Press **v** until "CH INPUT" is highlighted, then press the **Number buttons** (0-9, 100) to enter the channel number.



To lock out channels (continued)

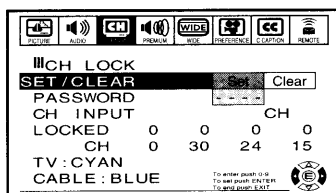
- 7** Press **ENTER**.



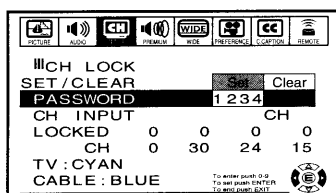
- 8** Repeat steps 6 and 7 for other channels.

To unlock channels

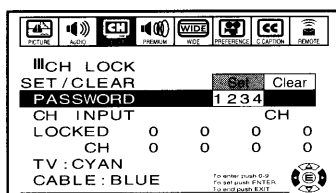
- 1** Follow steps 1 through 3 on the previous page, and select "Clear."



- 2** Press **✓** until "PASSWORD" is highlighted, and enter the 4-digit code used to lock out the channels with the **Number buttons**.



- 3** Press **ENTER**.



If a wrong code has been entered

These messages appear. Try to enter the correct code again.

WRONG PASSWORD
ENTER CORRECT ONE

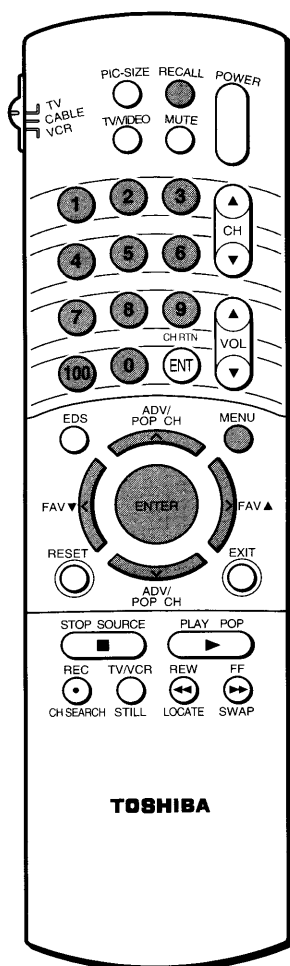
If you want to know the channels you have locked out

Call up the CH LOCK menu.

Labeling Channels

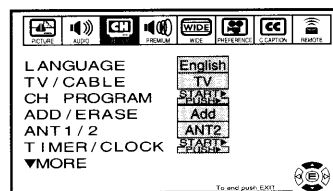
- This feature allows you to enter a 4 letter channel identifier of your choice that will appear over the channel number display. The label can be anything you want (for example the station call letters).
- The label you set will appear when you turn the TV on, select a channel, or press the **RECALL** button.

To program channel labels

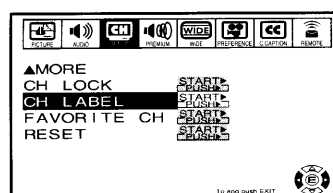


- 1 Press **MENU**, then press < or > until the SET UP menu appears.

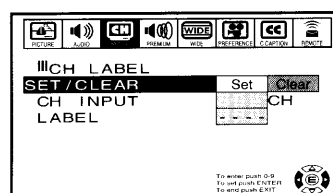
Example: To assign "ABCD" to channel 4.



- 2 Press ^ (or v) until "CH LABEL" is highlighted.

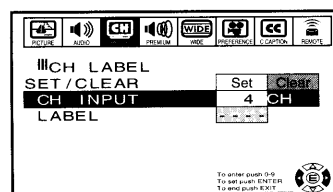


- 3 Press < or > to display the CH LABEL menu. "SET/CLEAR" will be highlighted.

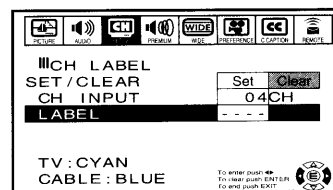


- 4 Press < or > to select "Set."

- 5 Press v until "CH INPUT" is highlighted, and select the channel you want to label with the **Channel Number** buttons (0 - 9).



- 6 Press v until "LABEL" is highlighted.



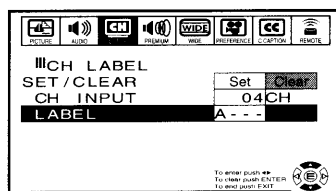
To program channel labels (continued)

- 7** Press < or > to select the first character for the label, then press **ENTER**.

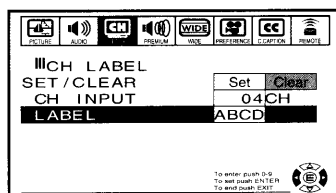
Letters of the alphabet, numbers and other graphic symbols are available for labeling.

Each time you press the < or > button, the displayed character will change in the following order.

> button → -- → 0 → 9 → A → Z → [] → + → blank
 < button → -- → + → [] → Z → A → 9 → 0 →



- 8** Repeat step 7 to enter the second, third and fourth characters.

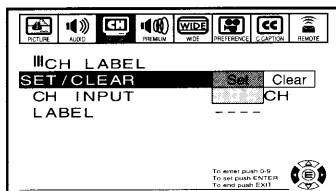


- 9** To label another channel, repeat steps 5 through 8.
 You can label 32 channels.

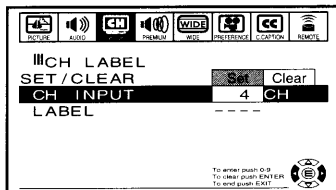
To clear the channel label

- 1** Select the CH LABEL menu in the SET UP menu.

- 2** Press < or > to select "Clear."



- 3** Press ∨ until "CH INPUT" is highlighted, then select the channel you want to clear with the **Channel Number** buttons.



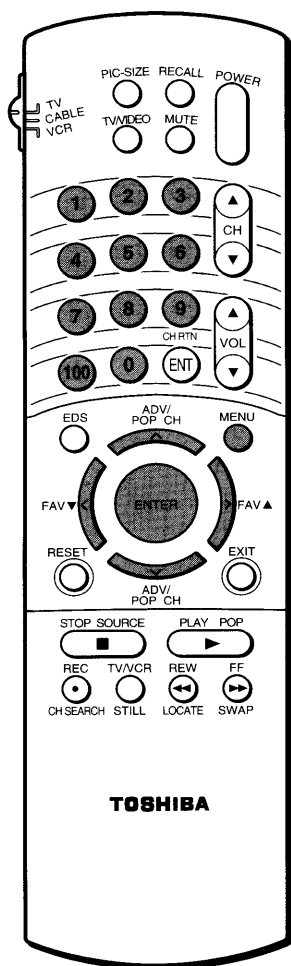
- 4** Press **ENTER**.

- 5** Repeat steps 3 and 4 for other channels.

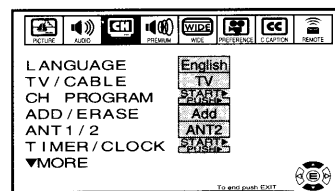
Programming Your Favorite Channels

- The Favorite Channel Programming feature allows you to program up to 12 of your favorite channels.
- Once programmed, you can use the **FAV** $\nabla/\blacktriangle$ buttons on the Remote Control to scan through only your favorite channels, skipping other channels you do not normally view.

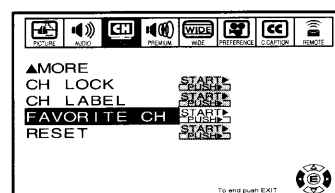
To program your favorite channels



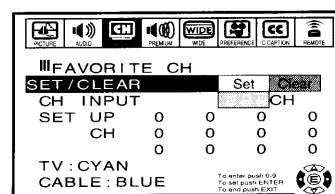
- Press **MENU**, then press $\leftarrow$ or $\rightarrow$ until the SET UP menu appears.



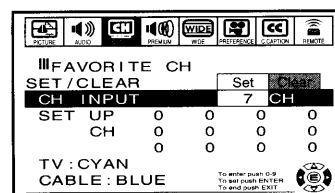
- Press $\wedge$ (or $\vee$) until "FAVORITE CH" is highlighted.



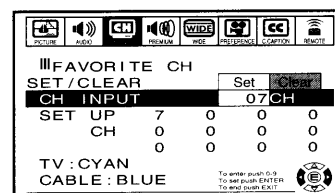
- Press $\leftarrow$ or $\rightarrow$ to display the FAVORITE CH menu. "SET/CLEAR" will be highlighted, then press $\leftarrow$ or $\rightarrow$ to select "Set."



- Press $\vee$ until "CH INPUT" is highlighted then press the **Channel Number** buttons to enter the channel number.



- Press **ENTER**.

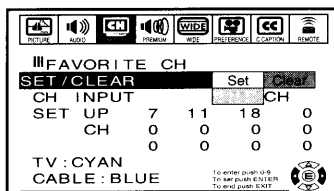


- Repeat steps 4 and 5 for other channels.

To select your favorite channels
Press **FAV** $\nabla/\blacktriangle$.
When you want to access all the channels you programmed in the TV's memory, press the **CHANNEL** $\nabla/\blacktriangle$ button.

To clear the channels you have programmed

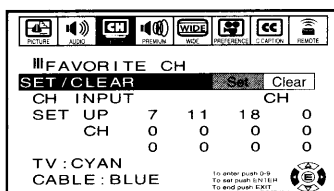
- 1 Select the FAVORITE CH menu.



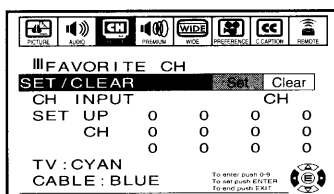
Note:

The **FAV** ▼/▲ buttons will function only after you have programmed your favorite channels.

- 2 Press < or > to select "Clear."

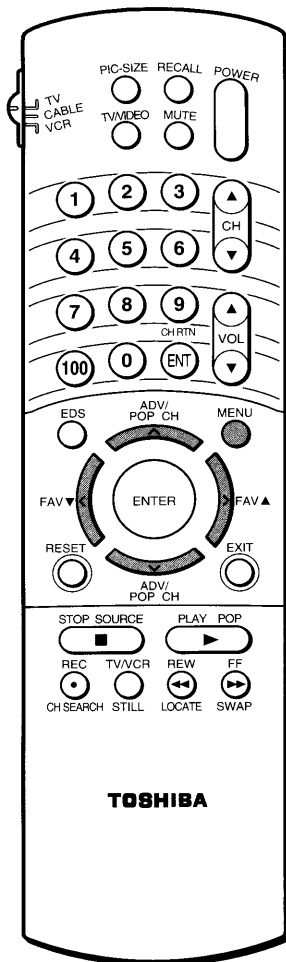
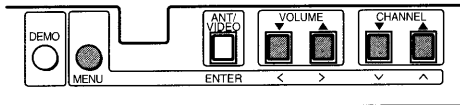


- 3 Press **ENTER**.
All the favorite channels you have programmed are cleared.



Operating the Closed Captioning Feature

To display Closed Captioning

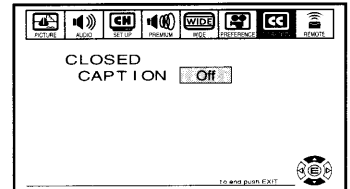


To view captions

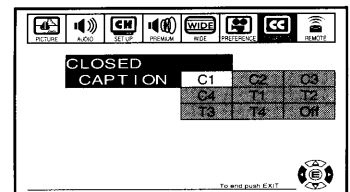
Closed captioning is a printed version of the dialogue, narration, and/or sound effects of a TV program. Captions will appear at either the top or bottom of the screen during captioned broadcasts as shown. Captioning is especially helpful for hearing impaired individuals.

1 Select the desired program.

2 Press **MENU**, then press **<** or **>** until the **CLOSED CAPTION** menu appears.



3 Press **^** or **v** until "CLOSED CAPTION" is highlighted.



4 Press **<** or **>** to select the caption you want — C1 (Caption 1), C2 (Caption 2), C3 (Caption 3), or C4 (Caption 4).

Select "C1" for a transcription of the primary language in your area.

To deactivate this function

Select "Off" in step 4 above.

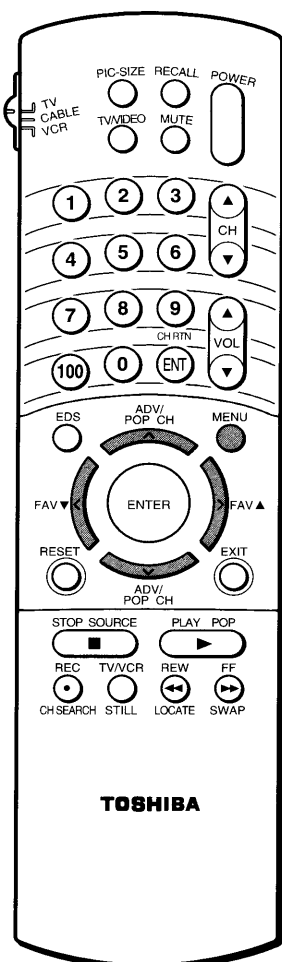
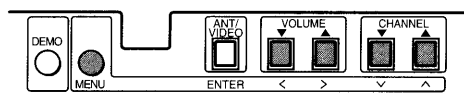
Note:

A closed-captioned signal may not be decoded in the following situations.

- When a video tape has been dubbed.
- When the signal reception is weak.
- When the signal reception is non-standard.

To display text information

WORLD WEATHER			
	Temps		Current Weather
	F	C	
LONDON	51	11	Clear
MOSCOW	57	14	Cloudy
PARIS	53	12	Clear
ROME	66	19	Cloudy
TOKYO	65	18	Rain

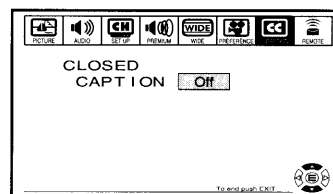


To view text

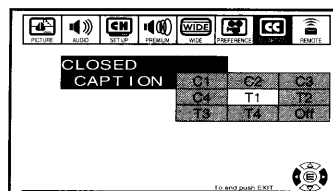
Text is information presented using all of the television screen. It is usually not related to the current program. For example, it could be a listing of closed captioned programs, news, weather information, or stock market reports.

1 Select the desired program.

2 Press **MENU**, then press < or > until the **CLOSED CAPTION** menu appears.



3 Press ^ or v until "CLOSED CAPTION" is highlighted.



4 Press < or > to select the text you want — T1 (Text 1), T2 (Text 2), T3 (Text 3), or T4 (Text 4).

To deactivate this function

Select "Off" in step 4 above.

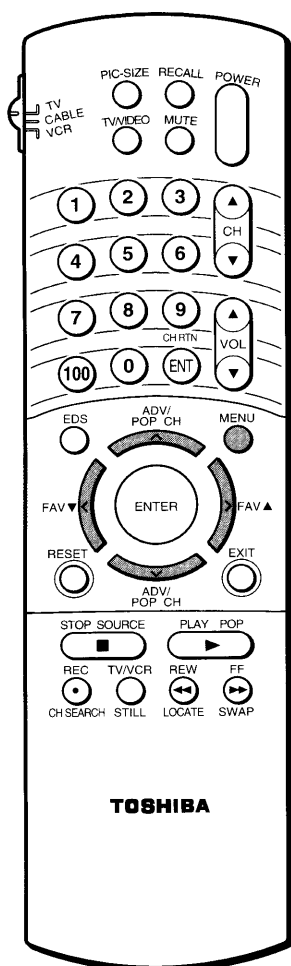
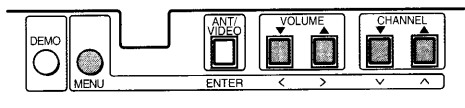
Note:

When you select a caption format channel and the text mode, the text screen will always be displayed.

However, if text character signals are not transmitted, the characters will not be displayed.

Flesh Tone/Noise Reduction

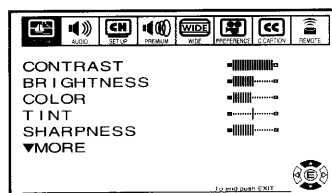
To activate the Flesh Tone and Noise Reduction Functions



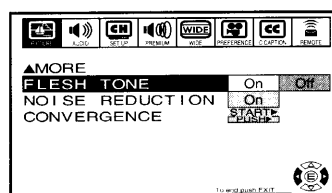
Flesh Tone function

This function allows you to obtain natural flesh tones by correcting the difference of tint between TV stations.

- 1 Press **MENU**, then press **<** or **>** until the PICTURE menu appears.



- 2 Press **^** (or **v**) until "FLESH TONE" is highlighted.

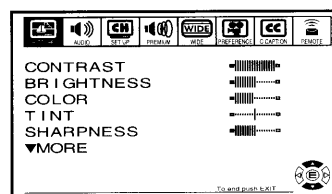


- 3 Press **<** or **>** to select "On."

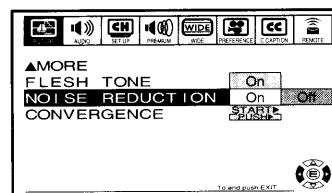
Noise Reduction function

This function allows you to reduce visible interference in your TV picture. This is useful when receiving a broadcast with a weak signal or playing back a video cassette or disk damaged by repeated use.

- 1 Press **MENU**, then press **<** or **>** until the PICTURE menu appears.



- 2 Press **^** (or **v**) until "NOISE REDUCTION" is highlighted.



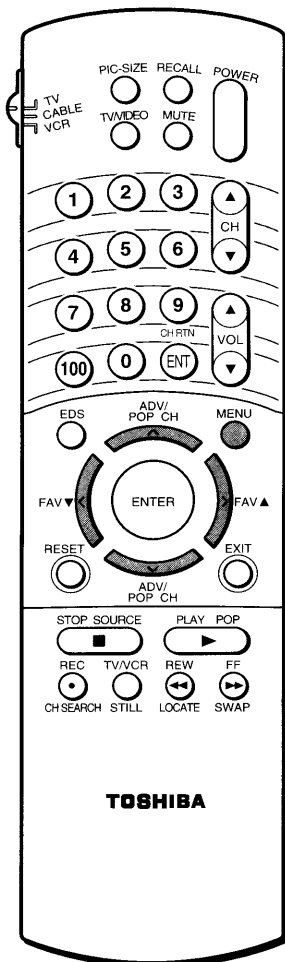
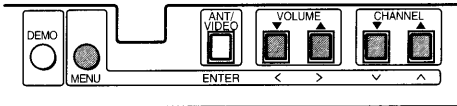
- 3 Press **<** or **>** to select "On."

To deactivate these functions
Select "Off" in step 3 above.

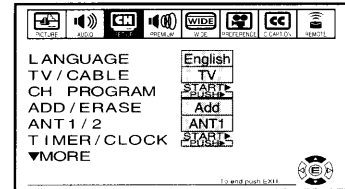
Changing the On-screen Display Language

- You can choose from three different languages (English, French and Spanish) for the on-screen displays (adjustment menus, and messages).

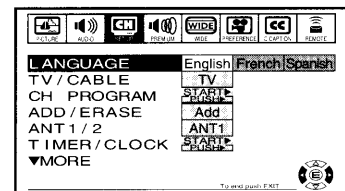
To select a language for the on-screen displays



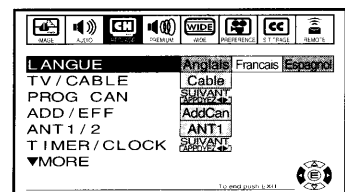
1 Press **MENU**, then press **<** or **>** until the SET UP menu appears.



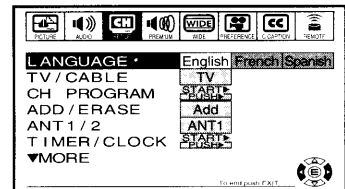
2 Press **↓** (or **↑**) until "LANGUAGE" is highlighted.



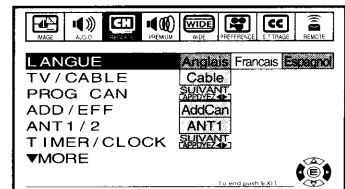
3 Press **<** or **>** to select the language you want.



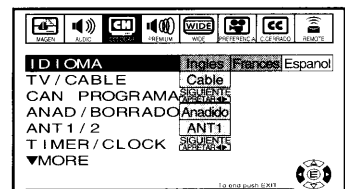
"English"



"French"

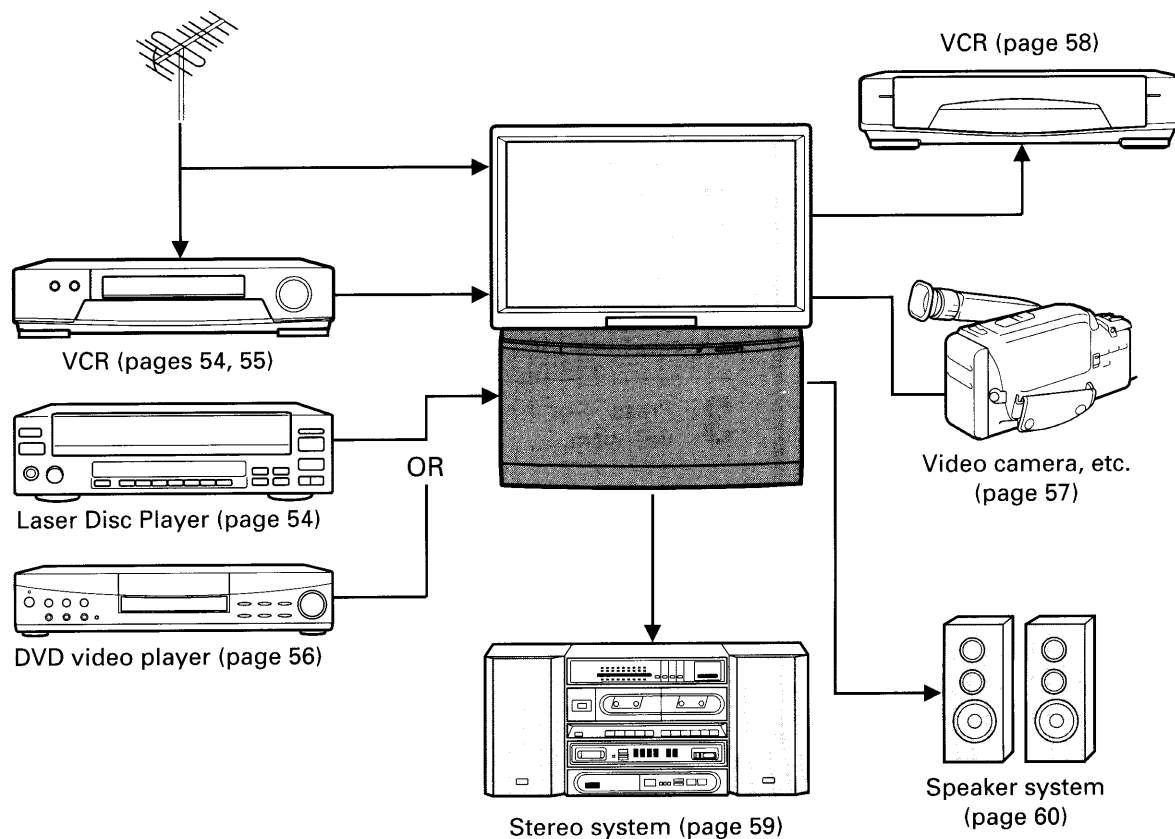


"Spanish"



Connecting External Equipment

To connect video/audio equipment

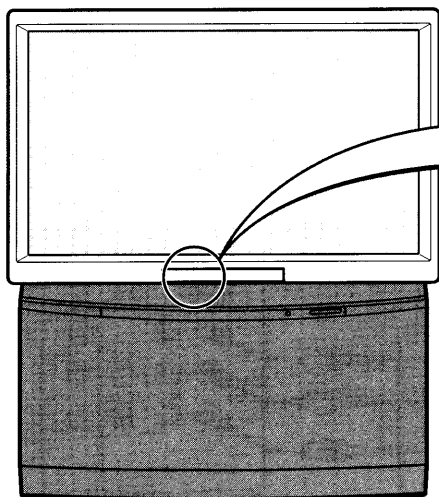


Notes:

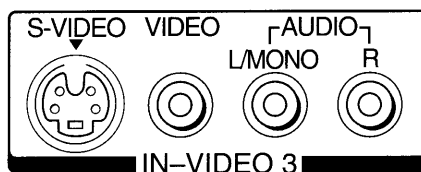
- Refer also to the owner's manual of the equipment to be connected.
- When connecting other equipment to the TV, first turn off all main power switches.

Monitor panel

TV front

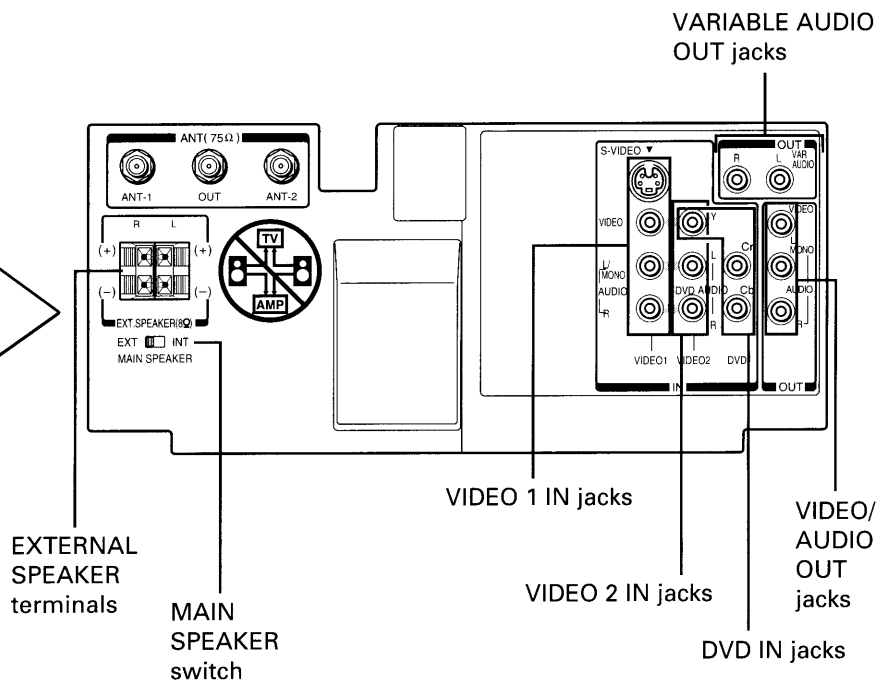
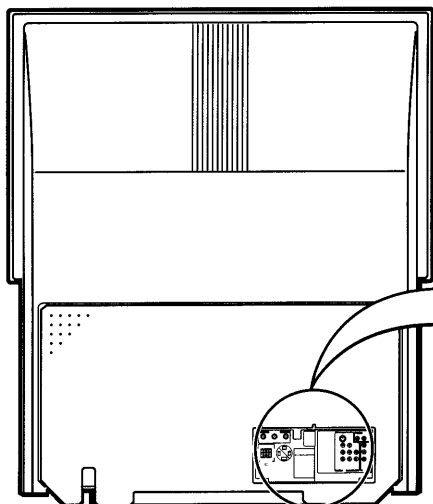


Behind the door



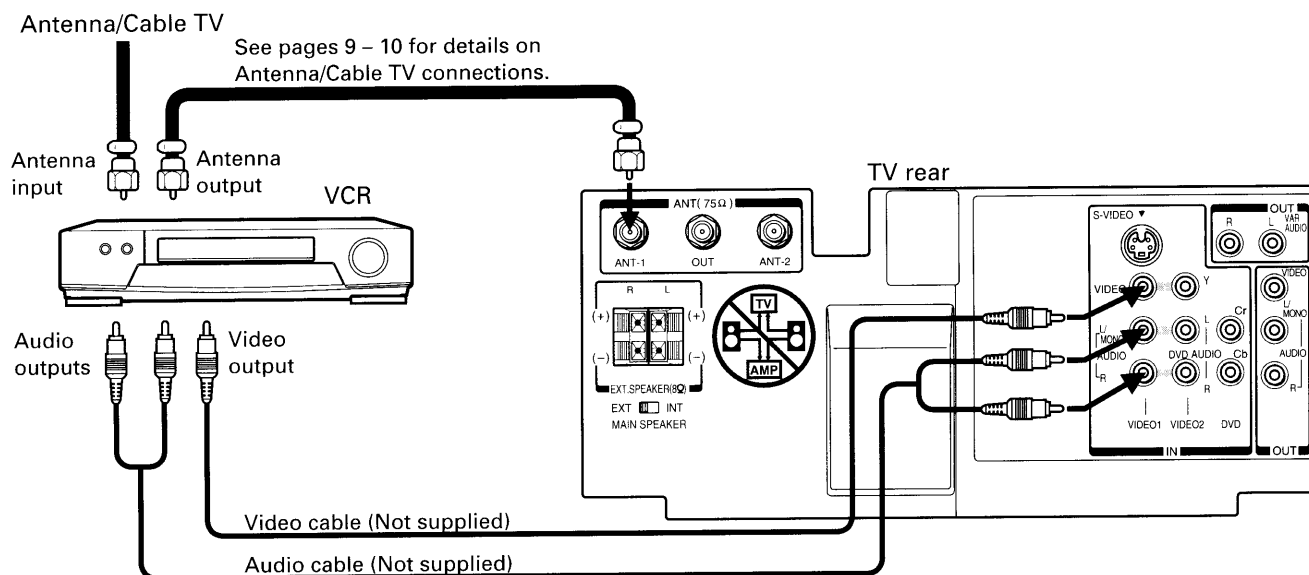
VIDEO 3 IN jacks

TV rear



CONNECTING OTHER
EQUIPMENT

Connect the VIDEO 1 or VIDEO 2 IN jacks on the rear panel of the TV to the video/audio output jacks of the VCR, Laser Disc Player, etc. for playback of video recordings.

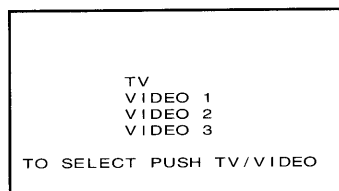


Press **TV/VIDEO** on the Remote Control (or **ANT/VIDEO** on the TV) repeatedly to select the appropriate source. Each time you press the button, the TV, VIDEO 1, VIDEO 2 or VIDEO 3 source will be selected in order. The selected source will be displayed in purple.

The VIDEO 2 INPUT jacks can also be used for connecting a second piece of video equipment with video/audio outputs.

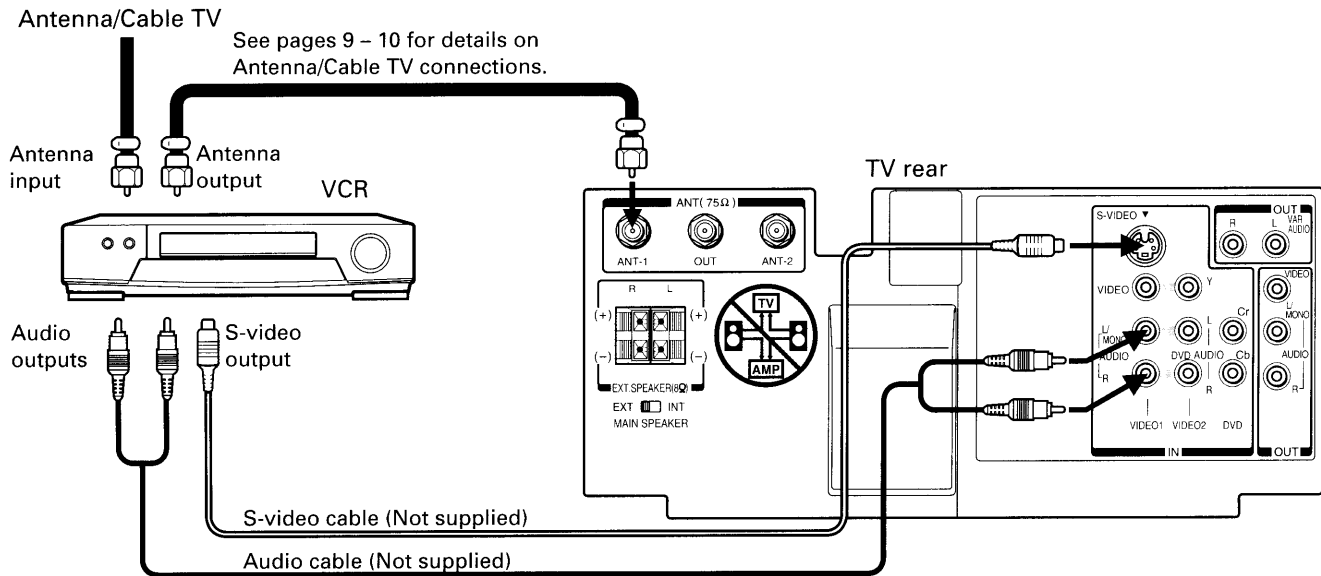
The VIDEO 3 INPUT jacks on the TV front panel are convenient for connecting portable video/audio equipment.

If you connect a monaural VCR, connect the audio output of the VCR to the L/MONO jack.



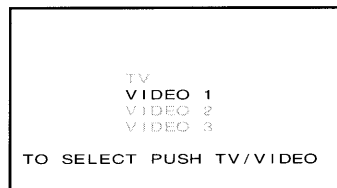
To connect a VCR with an S-video jack

If you connect a VCR with an S-video jack to the "S-VIDEO" jack on the TV rear, you must also connect the audio cables to the "VIDEO 1" AUDIO jacks on the TV rear panel. The S-video cable supplies video signals only.



To select the video input source

- 1 Turn on the TV and the VCR.
- 2 Press **TV/VIDEO** on the Remote Control (or **ANT/VIDEO** on the TV) to select "VIDEO 1."



Notes:

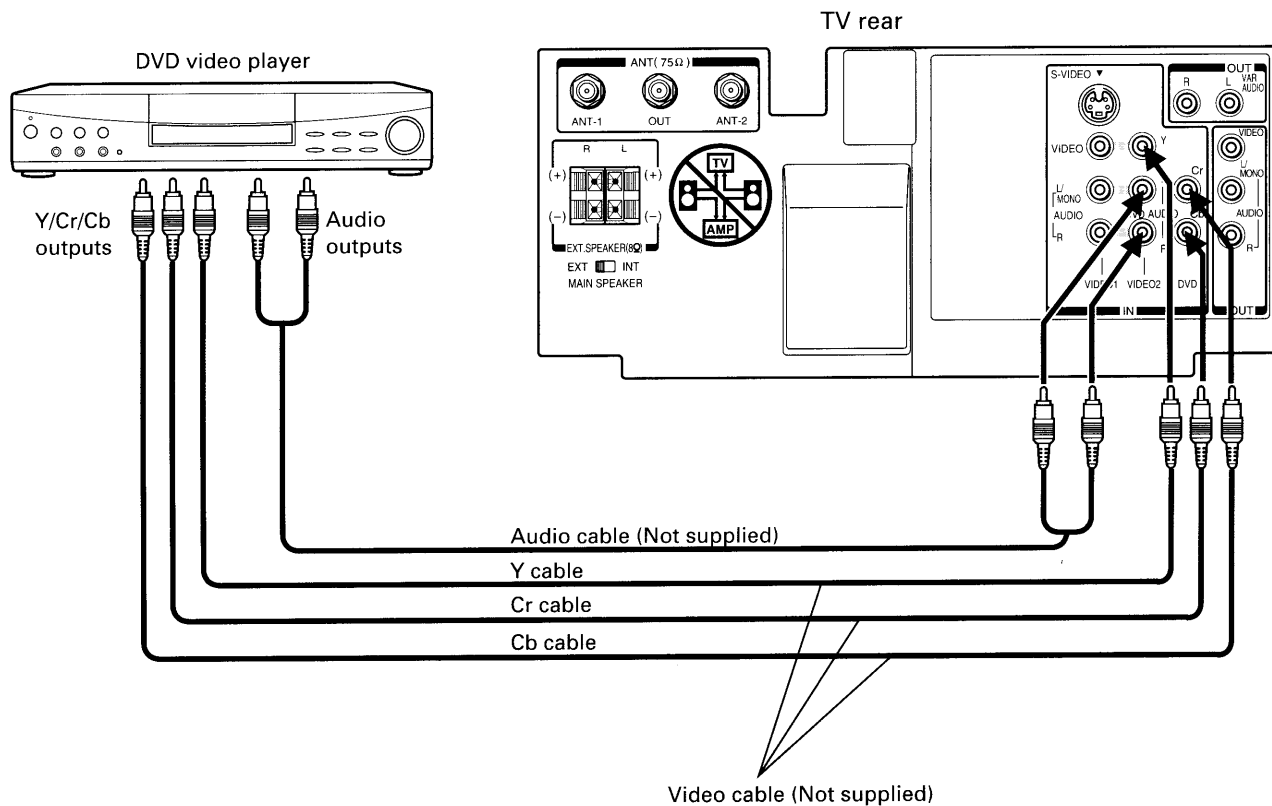
- When the S-video cable is connected to the S-VIDEO IN jack, the video cable (phono-type) should not be connected.
- The S-VIDEO jack accepts SEPARATED Luminance/Chrominance (Y/C) signals conforming to the NTSC standard.

- 3 Operate your VCR normally.

Connecting External Equipment (continued)

To connect a DVD video player

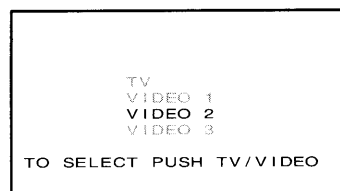
This connection allows you to view high-quality pictures from a DVD video player.



To select the video input source

1 Turn on the TV and the DVD video player.

2 Press **TV/VIDEO** on the Remote Control (or **ANT/VIDEO** on the TV) to select "VIDEO 2."



3 Operate your DVD video player normally.

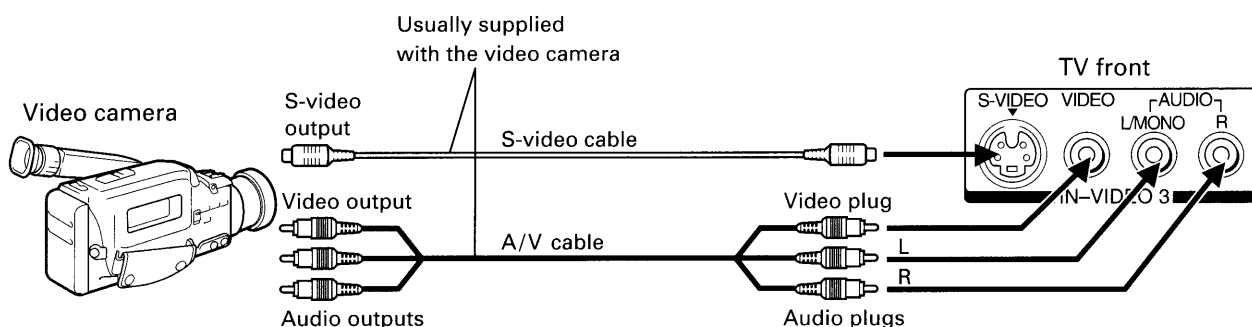
To connect a video camera

This connection allows you to view pictures from a video camera.

—If you have a video camera with an S-video jack, connect the S-video cable to the VIDEO 3 S-VIDEO jack.

—If you have a standard video camera, connect the video cable to the VIDEO 3 VIDEO jack.

With either video connection, you must connect the audio cables to hear the sound.

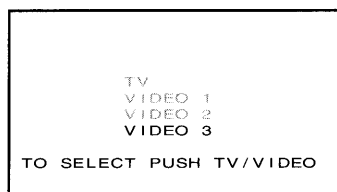


To select the video input source

To operate your video camera properly, see the instructions supplied with the connected video camera.

1 Turn on the TV and the video camera.

2 Press **TV/VIDEO** on the Remote Control (or **ANT/VIDEO** on the TV) to select "VIDEO 3."



3 Operate your video camera normally.

Notes:

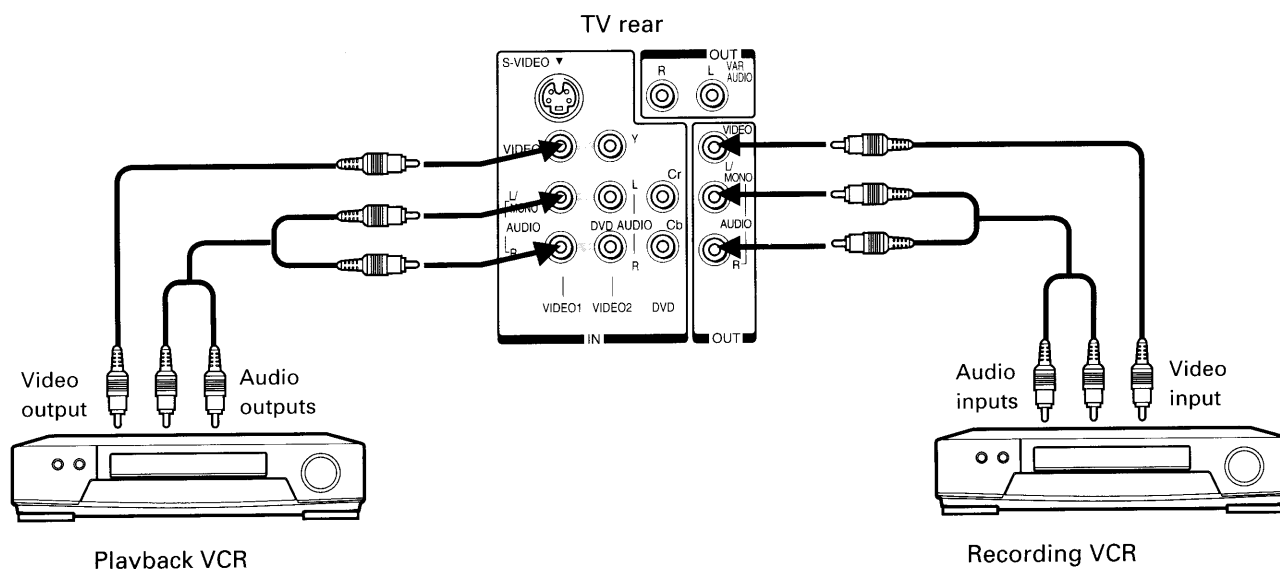
- When the S-video cable is connected to the S-VIDEO INPUT jack, the video cable (phono type) should not be connected.
- If you connect a monaural video camera, connect the audio output of the video camera to the L/MONO jack.

Connecting External Equipment (continued)

To dub/edit video tapes using two VCRs

To connect equipment for dubbing/editing

- 1 Connect the output jacks of the playback VCR to the input jacks (VIDEO 1, VIDEO 2 or VIDEO 3) on the TV.
- 2 Connect the output jacks (VIDEO/AUDIO OUT) on the TV to the input jacks of the recording VCR.



Note:

Do not connect one VCR to the output and input jacks on the TV at the same time.

To monitor dubbing/editing

- 1 Turn on the TV and both VCRs.
- 2 Press **TV/VIDEO** on the Remote Control (or **ANT/VIDEO** on the TV) to select "VIDEO 1" in this example.
- 3 Set the recording VCR to record mode and the playback VCR to play.
- 4 You can view the video signal from the playback VCR on the TV screen while dubbing it onto the recording VCR.

CAUTION:

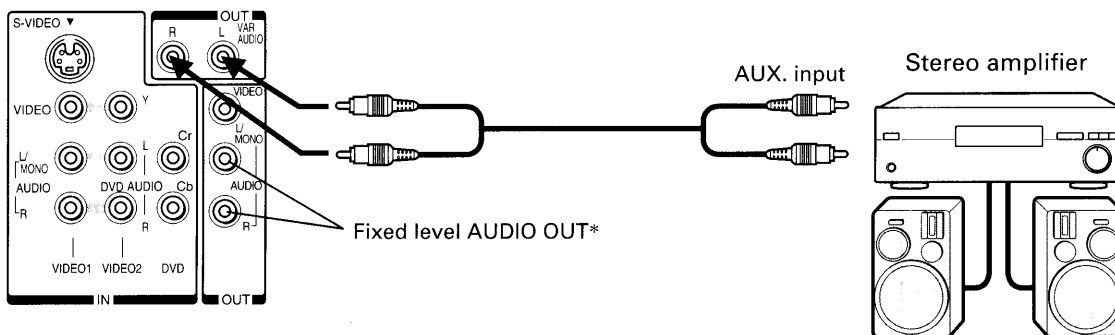
The unauthorized recording of television programs, video tapes and other materials may infringe upon the provisions of copyright laws.

Notes:

- The input switch of the VCR is normally in the TV position. Change the switch of the recording VCR to the LINE or CAMERA position when using the video/audio inputs of the VCR as above. Some VCRs automatically switch when cables are plugged into the video/audio inputs.
- The window picture cannot be output through the VIDEO OUTPUT.

To connect an audio amplifier

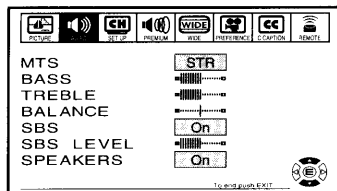
Connect the VARIABLE AUDIO OUT jacks to the auxiliary input jacks on the stereo amplifier. You can control the audio signal going to the audio equipment using the Remote Control for this TV.



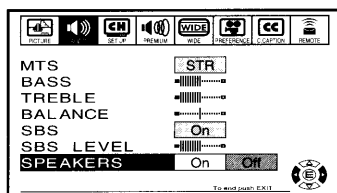
* The "fixed level" AUDIO OUT jacks are also available for connecting to an audio cassette recorder (or amplifier) to record audio from the TV. This constant audio signal is not affected by pressing the VOLUME buttons on the TV or the Remote Control for this TV.

To turn off the built-in speakers

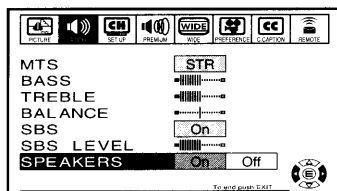
- 1 Press **MENU**, then press **<** or **>** until the **AUDIO** menu appears.



- 2 Press **^** or **v** until **"SPEAKERS"** is highlighted.



- 3 Press **<** or **>** to select **"Off."**



To turn on the built-in speakers

Select **"On"** in step 3.

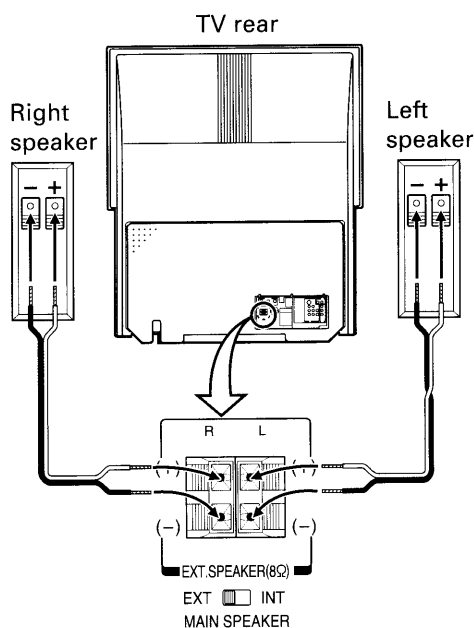
Note:

Make sure the volume control of your stereo amplifier is set to a moderate listening level.

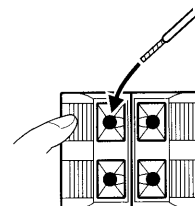
Connecting External Equipment (continued)

To connect external speakers

Before connecting the speakers, turn the TV off.



- 1 Connect the speaker leads. While pressing the lever, insert the wire. Then, release the lever. Match the right and left channels and +/- polarities of the TV speaker terminals with the external speakers.

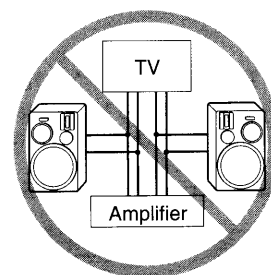


- 2 Set the MAIN SPEAKER switch to "EXT." The built-in TV speakers are switched off.



CAUTIONS:

- Do not connect external speakers to more than one audio source at a time. You will damage your equipment if you connect the same speaker system to both the TV and the amplifier.
- Use only external speakers with an impedance rating of 8 ohms and input power of 14 W or greater.



Specifications

TELEVISION SYSTEM	NTSC standard
CHANNEL COVERAGE	VHF: 2 through 13 UHF: 14 through 69 Cable TV: Mid band (A-8 through A-1, A through I) Super band (J through W) Hyper band (AA through ZZ, AAA, BBB) Ultra band (65 through 94, 100 through 125)
POWER SOURCE	120 V AC, 60 Hz
POWER CONSUMPTION	191 W (average)
AUDIO POWER	14 W + 14 W
SPEAKER TYPE	4 inches (10 cm) round, 4 pcs.
VIDEO/AUDIO TERMINALS	S-VIDEO INPUT (VIDEO 1/VIDEO 3) Y-INPUT: 1 V(p-p), 75 ohm, negative sync. C-INPUT: 0.286 V(p-p) (burst signal), 75 ohm VIDEO 1/VIDEO 2/VIDEO 3 INPUT VIDEO: 1 V(p-p), 75 ohm, negative sync. AUDIO: 150 mV(rms) (30% modulation equivalent, 47 kohm) DVD INPUT (Color difference input) Y: 1 V(p-p), 75 ohm Cr: 0.7 V(p-p), 75 ohm Cb: 0.7 V(p-p), 75 ohm VIDEO/AUDIO OUTPUT VIDEO: 1 V(p-p), 75 ohm, negative sync. AUDIO: 150 mV(rms) (30% modulation equivalent, 4.7 kohm) VARIABLE AUDIO OUTPUT 0–350 mV(rms) (30% modulation, 4.7 kohm) EXTERNAL SPEAKER TERMINALS Accepts speakers of 8 ohm impedance, 14 W or greater input power
DIMENSIONS	Width: 37–3/4 inches (958 mm) Height: 43–1/4 inches (1,098 mm) Depth: 16–7/8 inches (429 mm)
MASS	143 lbs (65 kg)
SUPPLIED ACCESSORIES	Remote Control with 2 size “AAA” batteries

Design and specifications are subject to change without notice.

Before Calling Service Personnel

- Before calling service personnel, please check the following chart for the possible cause of the problem you are experiencing.

Symptom	Solutions	Pages
The TV does not turn on.	• Make sure power cord is plugged in, then press POWER .	20
	• Check the batteries in the Remote Control. If the batteries are dead, replace them with new ones.	13
No picture, no sound	• Check the antenna/cable connections.	7
No sound, picture OK	• Maybe the sound is muted. Press VOLUME ▲ .	25
	• Maybe there is station trouble. Try another channel. • Check that the SPEAKERS function in AUDIO menu is properly set.	59
Poor sound, picture OK	• Maybe there is station trouble or local interference from an appliance. Try another channel.	
Poor picture, sound OK	• Check the antenna/cable connections. • Maybe there is station trouble or local interference. Try another channel. • Adjust the picture quality.	31
Poor reception of broadcast channels	• Try another channel. • Check the antenna/cable connections. • If using a VCR, check the TV/VCR switch.	14
Cannot receive UHF channels, VHF OK	• Make sure the TV/CABLE function is in "TV" mode.	22
Black box appears on the screen.	• Captioning may be turned on.	48
Cannot select a certain channel	• That channel may be locked out with the CH LOCK function, or erased with the ADD/ERASE function.	42 23
Multiple images (ghosts)	• Maybe there is station trouble. Try another channel. • Use a highly directional outdoor antenna.	
Poor color or no color	• Maybe there is station trouble or local interference. Try another channel. • Adjust TINT and/or COLOR in the PICTURE menu.	31
No stereo or SAP sound from an MTS broadcast	• Check that the MTS function is properly set.	35
The Remote Control does not operate.	• Check that the TV/CABLE/VCR switch is properly set. • Maybe something is between the Remote Control and the sensor. • Maybe batteries are dead. Try replacing batteries with new ones.	12, 14
		13

Limited United States Warranty

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty

TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair or replace a defective part, at their option, with a new or refurbished part without charge to you. "TACP/THI Authorized Service Station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the TACP/THI Authorized Service Station for repair and returned to your home at no cost to you"

Limited Two (2) Year Warranty of Picture Tube

TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will repair or replace a defective picture tube, at their option, with a new or refurbished picture tube without charge to you, except that if a defective picture tube is replaced after one (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Rental Units

The warranty for rental units begins with the first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

Commercial Units

Products sold and used for commercial use have a limited ninety (90) day warranty for all parts, labor and picture tube.

How to Obtain Warranty Service

If after following all of the operating instructions in this manual and checking the section "BEFORE CALLING SERVICE PERSONNEL," you find that service is needed;

- (1) Call the TACP toll free number 1-800-631-3811 after you find a defective product or part to find the nearest TOSHIBA Authorized Service Station.
- (2) Please present your bill of sale or other proof to the Authorized Service Station. "Authorized TACP/THI service station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the TACP/THI Authorized service station for repair and returned to your home at no cost to you."

In the Continental United States call:



HAWAII

327 Kamakee Street, Honolulu, HI 96814 (808) 521-5377

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall TACP or THI be liable for consequential or incidental damages.

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which action must be commenced to enforce any obligation of TACP or THI arising under this warranty or under any state, or law of the United States or any state thereof, is hereby limited to 90 days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages, so the above provisions may not apply to you.



ATTENTION CANADIAN CONSUMERS:

Canadian consumers are requested to complete the special Canadian "Warranty Registration Form" enclosed, and forward this completed form with a copy of bill of sale to TOSHIBA OF CANADA to "Register and Validate" their warranty.

Products purchased in the U.S.A. and used in Canada are not covered by these warranties.
Products Purchased in Canada and used in the U.S.A. are not covered by these warranties.

TOSHIBA AMERICA CONSUMER PRODUCTS, INC.

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TOSHIBA HAWAII, INC.

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TOSHIBA OF CANADA LTD.

HEAD OFFICE/191 McNABB STREET MARKHAM, ONTARIO L3R 8H2, CANADA TEL: (905) 470-5400
SERVICE CENTERS/TORONTO: 191 McNABB STREET MARKHAM, ONTARIO L3R 8H2, CANADA TEL: (905) 470-5400
MONTREAL: 1643, NORTH SERVICE RD., TRANS-CANADA HIGHWAY, DORVAL QUEBEC, H9P 1J1, CANADA
TEL: (514) 856-4100
VANCOUVER: 222171 FRASERWOOD WAY, RICHMOND, B.C. V6W 1J5, CANADA TEL: (604) 303-2500

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